

# Wetenschappelijk jaaroverzicht 2014



WETENSCHAPSCOMMISSIE

LEERHUIS

Albert Schweitzer  
ziekenhuis





# **Wetenschappelijk jaaroverzicht 2014**

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# Samenstelling Wetenschapscommissie 2014

## Dagelijks bestuur per 1 januari 2014

Dr. M.C.J.M. Kock, voorzitter, radioloog  
Dr. M-D Levin, vice-voorzitter, internist-hematoloog  
Drs. C.N. van Waardhuizen, beleidsadviseur  
Drs. A.D. Klaren, manager Leerhuis & Kwaliteit, Veiligheid en Innovatie  
Mw. E.Y. de Kruyf, secretariaat

## Dagelijks bestuur per 1 juni 2014

Dr. J. Riedl, voorzitter, klinisch chemicus  
Dr. M-D Levin, vice-voorzitter, internist-hematoloog  
Dr. J.L. Bosch, wetenschapscoördinator, klinisch epidemioloog  
Drs. A.D. Klaren, manager Leerhuis & Kwaliteit, Veiligheid en Innovatie  
Mw. E.Y. de Kruyf, secretariaat

## Leden wetenschapscommissie

Drs. M.M. Beex – Oosterhuis, ziekenhuisapotheker  
Dr. E.F.H. van Bommel, internist-nefroloog  
Dr. D. Cheung, longarts  
Drs. L.P.L.H. Cuijpers, klinisch psycholoog  
Dr. H.M.E. Frenay, arts-microbioloog  
Drs. I. Geelen, arts assistent interne geneeskunde  
Drs. E. Groot, geriater  
Drs. R. Hagens, arts assistent spoed eisende hulp  
Mw. K. Hamelink, IC verpleegkundige  
Mw. R. van Hof, medisch informatiespecialist  
Dr. M.C.J.M. Kock, radioloog  
Dr. M. Kofflard, cardioloog  
Dr. W. Lok, KNO arts  
Dr. B. Maraha, arts microbioloog  
Dr. A.C. de Mol, kinderarts  
Dr. E. Oskam, spoedeisende hulp arts  
Dr. P.W. Plaisier, chirurg  
Dr. N. van Putte – Katier, radioloog  
Drs. J.M.M. van de Ridder, adviseur Medische Vervolgopleidingen Leerhuis  
Drs. S. Rombout-de Weerd, gynaecoloog  
Dr. T.C.J. Sas, kinderarts  
Drs. A.M.J.V. Schyns – van den Berg, intensivist-anesthesioloog  
Drs. S. Slegers, arts assistent klinische fysica  
Dr. N.B. Swarte, gynaecoloog  
Drs. T.A.G. Tijssen, ziekenhuisapotheker  
Dr. I.J.H. van Vlodrop, arts-assistent klinisch chemicus

Drs. E.M. de Vogel, ziekenhuisapotheker  
Dr. P.J. Westenend, patholoog  
Dr. F.H.J. Wolfhagen, MDL arts  
Dr. D. Zemel, neuroloog

### Hoofredactie wetenschappelijk tijdschrift 'WASz'

Drs. S. Slegers, arts assistent klinisch fysicus  
Drs. I. Geelen, arts assistent interne geneeskunde  
Dr. M.C.J.M. Kock, radioloog



Voor ondersteuning bij wetenschappelijk onderzoek in het Albert Schweitzer ziekenhuis.  
*Onder:* Joke Bosch (Wetenschapscoördinator), Rianne van Hof (medisch informatiespecialist), Mark-David Levin (vice voorzitter Wetenschapscommissie), Agnes Klaren (lid Wetenschapscommissie en dagelijks bestuur), Ronald Hemerik (fondsenwerver wetenschap), Jurgen Riedl (voorzitter Wetenschapscommissie)  
*Boven:* Esther de Kruyf (secretariaat Wetenschapscommissie), Joost van Rosmalen (statisticus), Amerik de Mol (voorzitter WOAC)

## Woord vooraf

Hierbij presenteren de wetenschapscommissie en het wetenschapsbureau u het wetenschappelijk jaarverslag van het Albert Schweitzer ziekenhuis (ASz) over het jaar 2014. Wetenschap is een belangrijk speerpunt van het ASz. Verbetering van zorg gaat gepaard met goed wetenschappelijk onderzoek. Het ASz is een groot regionaal STZ ziekenhuis waarbij wetenschappelijk patiënt gebonden onderzoek goed mogelijk is. Om het wetenschappelijk klimaat en kwaliteit verder stimuleren worden verschillende activiteiten ingezet.

In het jaarverslag vindt u een overzicht van de wetenschappelijke activiteiten die dit jaar hebben plaatsgevonden. De activiteiten zijn in samenwerking met het Leerhuis van het ASz georganiseerd en gefaciliteerd. Daarnaast vindt u een overzicht van de wetenschappelijk publicaties en andere wetenschappelijk output van de klinische vakgroepen en andere afdelingen van het ASz. Eenentwintig afdelingen van het Albert Schweitzer ziekenhuis zijn dit jaar actief geweest in het publiceren van wetenschappelijk onderzoek. De afdelingen Cardiologie, Interne geneeskunde, Kindergeneeskunde en Pathologie hebben ook dit jaar weer een mooi aantal publicaties. De grootste groei in het aantal publicaties van de afgelopen 2 jaar is te zien bij de afdelingen Anesthesiologie, Chirurgie, Medische microbiologie en Radiologie.

Wetenschappelijk onderzoek binnen het ASz is niet mogelijk zonder de bevoegen inzet van de ASz professionals. Daarnaast dragen ook de goede multidisciplinaire samenwerkingen en contacten met diverse andere medische centra bij aan een mooi wetenschappelijke klimaat. We willen alle medewerkers hartelijk bedanken voor deze inzet en kijken uit een mooi inspirerende wetenschappelijke toekomst.

Namens de wetenschapscommissie,

*Joke Bosch, Wetenschapscoördinator wetenschapsbureau*

*Jurgen Riedl, Voorzitter wetenschapscommissie*



**Wetenschappelijk  
jaarverslag Weten-  
schapscommissie 2014**

## Wetenschapscommissie

De wetenschapscommissie van het ASz heeft als doel het medisch wetenschappelijk onderzoek te ondersteunen, te stimuleren en om een breed gedragen goed onderbouwd wetenschapsbeleid te maken. Daarnaast is de wetenschapscommissie binnen het ASz met diverse andere commissies en groepen actief om wetenschap te bevorderen, zoals de bibliotheek, de lokale toetsingscommissie (WOAC), de fondsenwerver, de afdeling communicatie en de medisch specialisten opleiders commissie (MSOC).

Vijf jaar geleden (2009) werd met het oprichten van de wetenschapscommissie een bredere basis gelegd voor het wetenschappelijke onderzoek in het ASz. Bijna iedere afdeling van ons ziekenhuis participeert binnen de wetenschapscommissie. Een jaar later (2010) werd een dagelijks bestuur gevormd, bestaande uit twee specialisten en vertegenwoordiging uit het wetenschapsbureau en het Leerhuis, welke maandelijks samenkomt. Voor statistisch onderwijs en ondersteuning werden statistici van de afdeling Biostatistiek van het Erasmus MC aangesteld om voor een dag in de week om consulten aan te bieden (2012). Dit jaar (2014) werd een klinisch epidemioloog aangesteld als wetenschapscoördinator.

### De vergaderdata in 2014 van de voltallige wetenschapscommissie waren:

Dinsdag 11 maart, zaal 5 Dordwijk  
Dinsdag 20 mei, zaal 5 Dordwijk  
Dinsdag 16 september, zaal 5 Dordwijk

### De vergaderdata van het dagelijks bestuur wetenschapscommissie waren:

Dinsdag 7 januari  
Dinsdag 4 februari  
Dinsdag 4 maart  
Dinsdag 8 april  
Dinsdag 6 mei  
Dinsdag 3 juni  
Dinsdag 1, 15 juli  
Dinsdag 2, 16 september  
Dinsdag 7 oktober  
Dinsdag 4, 18 november  
Dinsdag 2 december  
Woensdag 17 december

## Albert Schweitzer Stipendium

Sinds 2010 hebben we in het Albert Schweitzer ziekenhuis het onderzoeksfonds het *Albert Schweitzer Stipendium*. Dit stipendium wat in samenwerking met het Leerhuis en Raad van Bestuur in het leven is geroepen, biedt de mogelijkheid aan onderzoekers een tegemoetkoming in onderzoekskosten te krijgen en zodoende bijvoorbeeld tijd vrij te maken om aan onderzoek te kunnen besteden. Het Albert Schweitzer Stipendium is bedoeld voor patiëntgebonden, klinisch relevant onderzoek dat wordt uitgevoerd in en door het ASz en is geïnitieerd vanuit het ASz. Deze zijn bij voorkeur binnen de inhoudelijke prioriteiten die door de Raad van Bestuur zijn benoemd.

De stipendium aanvragen kunnen een tot twee jaarlijks worden ingediend, afhankelijk van het stipendium budget en de hoeveelheid aanvragen. Het indienen en beoordelen van deze projecten verloopt volgens een vaste procedure in een aantal fases. Doel van deze procedure is om de rechtsgelijkheid tussen indieners te garanderen, de transparantie van de beoordeling te vergroten en een vergelijking met subsidieprocedures elders mogelijk te maken. De wetenschapscommissie toetst de aanvragen die voor het wetenschapsfonds in aanmerking wenselijk te komen op transparante wijze.

In 2014, was een budget van bijna 100.00 euro beschikbaar.

De volgende onderzoeks aanvragen zijn gehonoreerd:

2014	Vakgroep	Aanvraag	Titel onderzoek
	Chirurgie	Maartje Sier	ISI trial en I-aid studie
	Radiologie	Evert Jan van Dijk	Diagnostic performance of Two View Synthesized 2D Image Reconstruction in Digital Breast Tomography (SDBT) in the detection of breastcancer. (Cview study)
	Gynaecologie	Eline Oostingh	Screening en diagnostiek bij Diabetes Gravidarum (GDM): prospectief klinisch single-centre onderzoek naar vergelijking van Breakfast creening Test (BST) versus 75-grams Orale Glucose Tolerantie Test (OGTT)
	SEH	Erick Oskam/Merel Willeboer	Pre-hospitale behandeling; vermindering van mortaliteit bij ernstige sepsis
	Neurologie	Elles Zock	Waarom zoekt het merendeel van de beroerte patiënten niet direct medische hulp? Een kwalitatieve studie
	SEH	Martijn van Hooft	Remifentanil-TCI for procedural sedation and analgesie in the Emergency Department: a randomized controlled trial
	Kinder-geneeskunde	Amerik Mol	Meconium Aspiratie Controle studie (MAC-studie) studie naar observatieduur bij pasgeborenen met meconiumhoudend vruchtwater
	Interne Geneeskunde	Hannah Rier	The changing muscle mass and mobility of elderly patients with malignant disease after treatment with palliative and adjuvant chemotherapy

	GKCL	Karlijn Stouten	Analyse van oorzaken van anemie in een huisartsenpopulatie: prevalentie en overleving
	Interne Geneeskunde	Sylvia Sprangers	Onderzoek naar het gebruik van een langdurig orale oncolytica behandeling bij de (hemato)oncologie patiënt binnen het Albert Schweitzer ziekenhuis
	Polikliniek Cardiologie	Anne Geert van Driel	De ICD rond het levenseinde; besluitvorming en voorlichting over de ICD in de laatste levensfase

## Wetenschappelijk tijdschrift 'WASz'



Het wetenschapstijdschrift van het ASz, het WASz, wordt twee keer per jaar in reguliere vorm uitgegeven en een keer in de vorm van een abstractenboek van de wetenschapsdag. Door middel van het tijdschrift worden medewerkers, verwijzers en andere geïnteresseerden periodiek op de hoogte gehouden van de wetenschappelijke activiteiten in het Albert Schweitzer ziekenhuis. De kosten voor

de uitgifte van het WASz worden volledig gedragen door de advertentie opbrengsten. De oplage van het WASz was 1000 exemplaren en is verspreid aan de specialisten, arts-assistenten, Raad van Bestuur, bedrijfsleiders, stafhoofden, wetenschapsbureaus STZ ziekenhuizen, huisartsen, fysiotherapeuten, apothekers en overig geïnteresseerden.

## Cursussen

De volgende cursussen zijn aangeboden in 2014.

Scholing	Door wie	Frequentie
Good Clinical Practice	Externe partij: TAPAS	1 x per jaar (november)
Wetenschappelijk schrijven in het Engels	Externe partij: Text en training	1 x per jaar, 6 bijeenkomsten (oktober, november en december)
Cursus poster maken	Leerhuis: Onderwijskundige	1 keer per jaar
Literatuur referenties	Bibliotheek: Medisch informatie specialist	Op aanvraag
PubMed	Bibliotheek: Medisch informatie specialist	Op aanvraag

## Wetenschapslunch

Elke vierde dinsdag in de maand wordt in het ASz een wetenschapslunch georganiseerd waarbij een onderzoeker zijn of haar lopend onderzoek presenteert en zijn of haar ervaringen deelt op dit gebied. Naast de wetenschapsdag biedt de wetenschapslunch onderzoekers een informeel platform, waarbij het doel is om van elkaar te leren, opbouwende kritiek te leveren, interdisciplinaire samenwerking t.a.v. wetenschappelijk onderzoek te stimuleren. In 2014 vonden de volgende presentaties plaats.

Datum	Onderwerp	Spreker/vakgroep
28-01-2014	Wetenschap met pieken en dalen	Jeroen Bosman - Klinische fysica
25-02-2014	Mammaonderzoek op de pathologie	Pieter Westenend - PAL
25-03-2014	Handfunctie na radialis catheterisatie	Rosanne Koopman - Research-medewerker cardiologie
22-04-2014	Anemie in adherentiegebied ASz	Karlijn Stouten - GKCL
27-05-2014	PEPPER, Persistent Ear Problems, Providing Evidence for Referral	Willeke Lok - KNO
23-09-2014	Delay in acute stroke care	Elles Zock - Neurologie
28-10-2014	Lijninfecties in zicht	Ingrid Steenis - Interne
25-11-2014	Remifentanil-TCI for procedural sedation and analgesia in SEH	Martijn van Hoof - SEH

## Ondersteuning onderzoek

Naast bovengenoemde activiteiten vindt individuele ondersteuning plaats door een klinisch epidemioloog en statisticus. In het Albert Schweitzer ziekenhuis hebben in het jaar 2014 meer dan 100 consulten plaats gevonden bij meer dan 15 verschillende afdelingen.

## Toesting en registratie niet WMO en WMO plichtige studies

In het Albert Schweitzer ziekenhuis is een Wetenschappelijk Onderzoek Advies Commissie (WOAC) aanwezig. De WOAC beoordeelt de bij haar ingediende wetenschappelijke onderzoeken (trials) op de lokale uitvoerbaarheid in het ziekenhuis en brengt hierover advies uit aan de Raad van Bestuur.

Sinds 2012 is de richtlijn 'Externe Toetsing' (RET 2012) van kracht. WMO-plichtige trials worden door de erkende toetsingscommissie medisch-ethisch getoetst, en bij goedkeuring worden deze trials door de WOAC lokaal getoetst op haalbaarheid. Het invullen van de Gestandaardiseerde controlelijst beoordelingscriteria lokale uitvoerbaarheid is daarbij van belang. Medisch-wetenschappelijk onderzoek geïnitieerd in het ASz en niet vallend onder de WMO wordt wel medisch-ethisch en op lokale uitvoerbaarheid door de WOAC beoordeeld.

De commissie werkt volgens een reglement. De commissie heeft een eigen site op intranet waar het reglement en de relevante informatie voor onderzoekers is te vinden.

De WOAC behandelde in 2014, 83 trials voor wetenschappelijk onderzoek. Hiervan waren 42 WMO plichtig en 41 niet WMO plichtig. Een stijging ten opzichte van 2013 toen 62 trials werden ingediend. In 2012 werden 59 trials, in 2011 55 trials ingediend. Van de 83 trials zijn er 16 trials die door specialisten/medewerkers van het ASz zelf geïnitieerd werden. M.u.v. 1 trial werden alle ingediende trials positief beoordeeld waar het gaat om de lokale uitvoerbaarheid. De Raad van Bestuur heeft – gehoord hebbende het advies van de WOAC – een lokale uitvoerbaarheidsverklaring voor deze trials afgegeven. Er was in 2014 sprake van 31 gesponsorde trials. (Zie document Jaarverslag Wetenschappelijk Onderzoek Advies Commissie 2014)

## Overige activiteiten

De wetenschapscoördinator en/of de voorzitter van de wetenschapscommissie heeft ten behoeve van interne en externe relaties dit jaar regelmatig overleg gehad met onder andere de Raad van Bestuur, Federatie Medische Specialisten (FMS), Wetenschappelijk Onderzoek Advies Commissie (de WOAC), Medische Specialist Opleidings Commissie (MSOC), Verpleegkundige Advies Raad. Daarnaast is de wetenschapscoördinator vertegenwoordigd in het STZ netwerk wetenschapscoördinatoren.

# **Wetenschapsdag ASz 2013**

Op de derde donderdag in juni, de 19<sup>e</sup>, vond de 10<sup>e</sup> wetenschapsdag plaats in het Auditorium van het ASz. De wetenschapsdag werd bezocht door meer dan 80 deelnemers uit de diverse afdelingen van het ziekenhuis. Het programma was zeer gevarieerd waarbij plenair 9 mondelinge presentaties werden gegeven en 23 poster presentaties met mondelinge flits presentaties uit bijna alle vakgroepen van het ziekenhuis.

De prijs voor beste publicatie werd uitgereikt aan Meindert Crop met het artikel "Influence of C-reactive protein levels and age on the value of D-dimer in diagnosing pulmonary embolism". De beste mondelinge presentatie ging naar Agnes Jonkheer en de beste poster presentatie ging naar Ingrid Steenis.

## Mondelinge presentaties

Abstract titel	Specialisme	Inzending
Verhoogde operatiesterfte voor longkankerchirurgie uitgevoerd op vrijdag	Heelkunde	P. Plaisier
Feedback perception medical trainees (residents and clerks) in Germany and The Netherlands	Leerhuis	M.D. Visser
Outcome of patients with idiopathic retroperitoneal fibrosis treated with tamoxifen or corticosteroid monotherapy	Interne Geneeskunde	F. van der Bilt
The effects of group therapy for adults with ADHD: a multicenter study	Psychiatrie	M. Derksen
Not all who wander are lost. Een onderzoek naar sociaal hulpvaardig gedrag van medewerkers.	Facilitaire ondersteuning Mondeling presentatie	A.M. Jonkheer
Analysis of causes of anaemia found in a general practice population: prevalence and survival	GKCL	K. Stouten
Digital chest X-ray in diagnosing congestive heart failure: what is the evidence?	Radiologie	D. Goei
Hyperemesis gravidarum: speelt cortisol een rol?	Klinisch Verloskundige	G. Veije
Specific immunoglobulin E to Ara h 2 as predictor for peanut allergy in children in a general Dutch hospital	Kindergeneeskunde	M. Schots



## Poster presentaties

Abstract titel	Specialisme	Inzending
Verandering van steriliteit in het verzorgen van een port-a-cath: kosten- en veiligheidsaspecten	Afdeling B3	M. van den Heuvel
Cell salvage in hip- and knee arthroplasty: A meta-analysis of randomized controlled trials	Anesthesie	A. Koopman
Association between prognostic markers and poor exercise capacity in hypertrophic cardiomyopathy	Cardiologie	D.H.F. Gommans
Moet de anastomose voor opheffen van ontlastend ileostoma eerst onderzocht worden?	Chirurgie	S. Troquay
Het optimaal reguleren van de bloed-glucosewaarden na het eten van vette maaltijden bij kinderen met diabetes type 1 met pomptherapie	Diëtetiek	S. van Gils
Morfologie van megakaryocyten bij myeloproliferatieve aandoeningen; zien we verschillen?	GKCL	L. van der Heul
Patient discharge, time for evaluation!	Gynaecologie	I. Vlot
"Desinfecteer elke keer"	Infectiepreventie	N. Kenters
Congenitale Factor VII deficiëntie als oorzaak voor persisterend vaginaal bloedverlies	Kindergeneeskunde	K. Welborn
Radiation dose reduction for pain physicians during interventional procedures	Klinische Fysica	S. Slegers
Wat zijn de klachten van patiënten over A(N)IOS, in het bijzonder chirurgische assistenten en welke kosten brengt dit met zich mee?	Leerhuis	R. Oostenbroek
Ervaringen van chronische, palliatieve longpatiënten die thuis begeleid worden door longverpleegkundigen	Longgeneeskunde	N. van de Graaf
An algorithm for electronic surveillance of hospital acquired infections	Medische microbiologie	R. Streefkerk
Does psychological distress, type D and illness perceptions predict attendance at cardiac rehabilitation	PAAZ	M. ten Voorde
Her2 immunohistochemical scoring: Man versus machine	Pathologie	S.M. Makkus

Non primary breast malignancies: A single institution's experience of a diagnostic challenge	Pathologie	P. Westenend
The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma	Pathologie	P. Westenend
Risk of contralateral breast cancer in relation to nodal status of the primary tumour	Pathologie	P. Westenend
Patient discharge, time for evaluation!	Pathologie	P. Westenend
Quality improvement in surgical breast cancer care: A decrease in positive surgical margins after first breast conserving	Pathologie	P. Westenend
Breast cancer pathology differences between hospitals in The Netherlands - RESULTS from the NABON Breast Cancer Audit	Pathologie	P. Westenend
Anafylactoïde reactie op acetylcysteïne na een paracetamolintoxicatie: staken of doorbehandelen?	Ziekenhuisapotheek	R.J. Schoemakers
Een kosten- en batenanalyse van medicatiebeoordeling bij langdurig opgenomen chronisch psychiatrische patiënten	Ziekenhuisapotheek	M. Beex



# **Wetenschappelijk jaaroverzicht 2014 per vakgroep**

## I. PUBMED publicaties

In onderstaande tabel staan het aantal PubMed publicaties die in de afgelopen drie jaar van een of meer van onze professionals van het Albert Schweitzer ziekenhuis zijn gepubliceerd.

Tabel Aantal Pubmed publicaties in het ASz

Aantal PubMed publicaties*	2012	2013	2014
<b>Specialisme**</b>			
Anesthesiologie	2	3	9
Cardiologie	5	7	7
Chirurgie	9	15	18
Dermatologie	2	4	4
Facilitair bedrijf			
Gynaecologie	10	5	8
Intensive Care geneeskunde			
Interne geneeskunde	10	12	10
Keel, neus en oorheelkunde	1		1
Kindergeneeskunde	7	6	10
Klinische chemie	1	2	4
Klinische fysica			2
Klinische geriatrie			
Leerhuis	1		1
Longgeneeskunde	1		
MDL-geneeskunde	4	3	3
Medische microbiologie	2	5	8
Neurochirurgie		1	
Neurologie	3	3	2
Oogheelkunde		1	1
Orthopedie	1		
Pathologie	7	8	10
Poliklinische apotheken			
Psychiatrie			
Radiologie	5	6	15
Reumatologie	2	1	3
Spoedeisende geneeskunde		1	
Urologie	1		1
Ziekenhuisapotheek		1	1

\* Voor de verantwoording van de getallen verwijzen we naar de paragraaf verantwoording van dit jaaroverzicht.

\*\* Als meerdere afdelingen waren betrokken bij een publicatie wordt deze publicatie bij de betreffende afdelingen weer gegeven.

## **Covariates of intravenous paracetamol pharmacokinetics in adults.**

Allegaert K, Oikola KT, Owens KH, Van de Velde M, de Maat MM, Anderson BJ.

Collaborators: Liukas A, Kulo A, de Hoon JN, **Ponsen HH**, Reith DM.

BMC Anesthesiol. 2014 Sep 13;14:77. doi: 10.1186/1471-2253-14-77. eCollection 2014.

**BACKGROUND:** Pharmacokinetic estimates for intravenous paracetamol in individual adult cohorts are different to a certain extent, and understanding the covariates of these differences may guide dose individualization. In order to assess covariate effects of intravenous paracetamol disposition in adults, pharmacokinetic data on discrete studies were pooled.

**METHODS:** This pooled analysis was based on 7 studies, resulting in 2755 time-concentration observations in 189 adults (mean age 46 SD 23 years; weight 73 SD 13 kg) given intravenous paracetamol. The effects of size, age, pregnancy and other clinical settings (intensive care, high dependency, orthopaedic or abdominal surgery) on clearance and volume of distribution were explored using non-linear mixed effects models.

**RESULTS:** Paracetamol disposition was best described using normal fat mass (NFM) with allometric scaling as a size descriptor. A three-compartment linear disposition model revealed that the population parameter estimates (between subject variability,%) were central volume (V1) 24.6 (55.5%) L/70 kg with peripheral volumes of distribution V2 23.1 (49.6%) L/70 kg and V3 30.6 (78.9%) L/70 kg. Clearance (CL) was 16.7 (24.6%) L/h/70 kg and inter-compartment clearances were Q2 67.3 (25.7%) L/h/70 kg and Q3 2.04 (71.3%) L/h/70 kg. Clearance and V2 decreased only slightly with age. Sex differences in clearance were minor and of no significance. Clearance, relative to median values, was increased during pregnancy (FPREG = 1.14) and decreased during abdominal surgery (FABDCL = 0.715). Patients undergoing orthopaedic surgery had a reduced V2 (FORTHOV = 0.649), while those in intensive care had increased V2 (FICV = 1.51).

**CONCLUSION:** Size and age are important covariates for paracetamol pharmacokinetics explaining approximately 40% of clearance and V2 variability. Dose individualization in adult subpopulations would achieve little benefit in the scenarios explored.

PMID: 25342929

## **De-implementation of expensive blood saving measures in hip and knee arthroplasties: study protocol for the LISBOA-II cluster randomized trial.**

Veronique MA Voorn, Perla J Marang-van de Mheen, Cynthia So-Osman, Ad A Kaptein, Anja van der Hout, M Elske van den Akker-van Marle, **Ankie WMM Koopman-van Gemert**, Albert Dahan<sup>5</sup>, Rob GHH Nelissen, Thea PMM Vliet Vlieland and Leti van Bodegom-Vos  
Implement Sci. 2014 Apr 23;9:48. doi: 10.1186/1748-5908-9-48.

Hip/knee arthroplasties, Blood transfusion, Patient blood management, Blood saving measures, De-implementation.

This trial is registered at the Dutch Trial Register NTR4044.

Despite evidence that erythropoietin and intra- and postoperative blood salvage are expensive techniques considered to be non-cost-effective in primary elective total hip and knee

arthroplasties in the Netherlands, Dutch medical professionals use them frequently to prevent the need for allogeneic transfusion.

To actually change physicians' practice, a tailored strategy aimed at barriers that hinder physicians in abandoning the use of erythropoietin and perioperative blood salvage was systematically developed. The study aims to examine the effectiveness, feasibility and costs of this tailored de-implementation strategy compared to a control strategy.

PMID: 24755214

### **Influence of early goal-directed therapy using arterial waveform analysis on major complications after high-risk abdominal surgery: study protocol for a multicenter randomized controlled superiority trial.**

Montenij L, de Waal E, **Frank M**, van Beest P, de Wit A, Kruitwagen C, Buhre W, Scheeren T. *Trials*. 2014 Sep 16;15:360. doi: 10.1186/1745-6215-15-360.

**BACKGROUND:** Early goal-directed therapy refers to the use of predefined hemodynamic goals to optimize tissue oxygen delivery in critically ill patients. Its application in high-risk abdominal surgery is, however, hindered by safety concerns and practical limitations of perioperative hemodynamic monitoring. Arterial waveform analysis provides an easy, minimally invasive alternative to conventional monitoring techniques, and could be valuable in early goal-directed strategies. We therefore investigate the effects of early goal-directed therapy using arterial waveform analysis on complications, quality of life and healthcare costs after high-risk abdominal surgery.

**METHODS:** In this multicenter, randomized, controlled superiority trial, 542 patients scheduled for elective, high-risk abdominal surgery will be included. Patients are allocated to standard care (control group) or early goal-directed therapy (intervention group) using a randomization procedure stratified by center and type of surgery. In the control group, standard perioperative hemodynamic monitoring is applied. In the intervention group, early goal-directed therapy is added to standard care, based on continuous monitoring of cardiac output with arterial waveform analysis. A treatment algorithm is used as guidance for fluid and inotropic therapy to maintain cardiac output above a preset, age-dependent target value. The primary outcome measure is a combined endpoint of major complications in the first 30 days after the operation, including mortality. Secondary endpoints are length of stay in the hospital, length of stay in the intensive care or post-anesthesia care unit, the number of minor complications, quality of life, cost-effectiveness and one-year mortality and morbidity.

**DISCUSSION:** Before the start of the study, hemodynamic optimization by early goal-directed therapy with arterial waveform analysis had only been investigated in small, single-center studies, including minor complications as primary endpoint. Moreover, these studies did not include quality of life, healthcare costs, and long-term outcome in their analysis. As a result, the definitive role of arterial waveform analysis in the perioperative hemodynamic assessment and care for high-risk surgical patients is unknown, which gave rise to the present trial. Patient inclusion started in May 2012 and is expected to end in 2016. **TRIAL REGISTRATION:** This trial was registered in the Dutch Trial Register (registration number NTR3380) on 3 April 2012.

PMID: 25227114

**Patient acceptable symptom states after total hip or knee replacement at mid-term follow-up: Thresholds of the Oxford hip and knee scores.**

Keurentjes JC, Van Tol FR, Fiocco M, So-Osman C, Onstenk R, **Koopman-Van Gemert AW**, Pöll RG, Nelissen RG.

Bone Joint Res. 2014 Jan 13;3(1):7-13. doi: 10.1302/2046-3758.31.2000141. Print 2014.

Health-related quality of life; PROMs; Patient Acceptable Symptom State; Patient reported outcome measures; THR; TKR; Total hip replacement; Total knee replacement  
To define Patient Acceptable Symptom State (PASS) thresholds for the Oxford hip score (OHS) and Oxford knee score (OKS) at mid-term follow-up.

PMID: 24421318

**Patient blood management in elective total hip- and knee-replacement surgery (Part 1): a randomized controlled trial on erythropoietin and blood salvage as transfusion alternatives using a restrictive transfusion policy in erythropoietin-eligible patients.**

So-Osman C, Nelissen RG, **Koopman-van Gemert AW**, Kluyver E, Pöll RG, Onstenk R, Van Hilten JA, Jansen-Werkhoven TM, van den Hout WB, Brand R, Brand A.

Anesthesiology. 2014 Apr;120(4):839-51. doi: 10.1097/ALN.000000000000134.

BACKGROUND: Patient blood management combines the use of several transfusion alternatives. Integrated use of erythropoietin, cell saver, and/or postoperative drain reinfusion devices on allogeneic erythrocyte use was evaluated using a restrictive transfusion threshold.

METHODS: In a factorial design, adult elective hip- and knee-surgery patients with hemoglobin levels 10 to 13 g/dl (n = 683) were randomized for erythropoietin or not, and subsequently for autologous reinfusion by cell saver or postoperative drain reinfusion devices or for no blood salvage device. Primary outcomes were mean allogeneic intra- and postoperative erythrocyte use and proportion of transfused patients (transfusion rate). Secondary outcome was cost-effectiveness.

RESULTS : With erythropoietin (n = 339), mean erythrocyte use was 0.50 units (U)/patient and transfusion rate 16% while without (n = 344), these were 0.71 U/patient and 26%, respectively. Consequently, erythropoietin resulted in a nonsignificant 29% mean erythrocyte reduction (ratio, 0.71; 95% CI, 0.42 to 1.13) and 50% reduction of transfused patients (odds ratio, 0.5; 95% CI, 0.35 to 0.75). Erythropoietin increased costs by €785 per patient (95% CI, 262 to 1,309), that is, €7,300 per avoided transfusion (95% CI, 1,900 to 24,000). With autologous reinfusion, mean erythrocyte use was 0.65 U/patient and transfusion rate was 19% with erythropoietin (n = 214) and 0.76 U/patient and 29% without (n = 206). Compared with controls, autologous blood reinfusion did not result in erythrocyte reduction and increased costs by €537 per patient (95% CI, 45 to 1,030).

CONCLUSIONS: In hip- and knee-replacement patients (hemoglobin level, 10 to 13 g/dl), even with a restrictive transfusion trigger, erythropoietin significantly avoids transfusion, however, at unacceptably high costs. Autologous blood salvage devices were not effective.

PMID: 24424070

**Patient blood management in elective total hip- and knee-replacement surgery (part 2): a randomized controlled trial on blood salvage as transfusion alternative using a restrictive transfusion policy in patients with a preoperative hemoglobin above 13 g/dl.**

So-Osman C, Nelissen RG, **Koopman-van Gemert AW**, Kluyver E, Pöll RG, Onstenk R, Van Hilten JA, Jansen-Werkhoven TM, van den Hout WB, Brand R, Brand A. *Anesthesiology*. 2014 Apr;120(4):852-60. doi: 10.1097/ALN.000000000000135.

**BACKGROUND:** Patient blood management is introduced as a new concept that involves the combined use of transfusion alternatives. In elective adult total hip- or knee-replacement surgery patients, the authors conducted a large randomized study on the integrated use of erythropoietin, cell saver, and/or postoperative drain reinfusion devices (DRAIN) to evaluate allogeneic erythrocyte use, while applying a restrictive transfusion threshold. Patients with a preoperative hemoglobin level greater than 13 g/dl were ineligible for erythropoietin and evaluated for the effect of autologous blood reinfusion.

**METHODS:** Patients were randomized between autologous reinfusion by cell saver or DRAIN or no blood salvage device. Primary outcomes were mean intra- and postoperative erythrocyte use and proportion of transfused patients (transfusion rate). Secondary outcome was cost-effectiveness.

**RESULTS:** In 1,759 evaluated total hip- and knee-replacement surgery patients, the mean erythrocyte use was 0.19 (SD, 0.9) erythrocyte units/patient in the autologous group (n = 1,061) and 0.22 (0.9) erythrocyte units/patient in the control group (n = 698) (P = 0.64). The transfusion rate was 7.7% in the autologous group compared with 8.3% in the control group (P = 0.19). No difference in erythrocyte use was found between cell saver and DRAIN groups. Costs were increased by €298 per patient (95% CI, 76 to 520).

**CONCLUSION:** In patients with preoperative hemoglobin levels greater than 13 g/dl, autologous intra- and postoperative blood salvage devices were not effective as transfusion alternatives: use of these devices did not reduce erythrocyte use and increased costs.

PMID: 24434302

**Perceived barriers among physicians for stopping non-cost-effective blood-saving measures in total hip and total knee arthroplasties.**

Voorn VM, Marang-van de Mheen PJ, Wentink MM, Kaptein AA, **Koopman-van Gemert AW**, So-Osman C, Vliet Vlieland TP, Nelissen RG, van Bodegom-Vos L; LISBOA Study Group. *Transfusion*. 2014 Oct;54(10 Pt 2):2598-607. doi: 10.1111/trf.12672. Epub 2014 May 5.

**BACKGROUND:** Despite evidence that the blood-saving measures (BSMs) erythropoietin (EPO) and intra- and postoperative blood salvage are not (cost-)effective in primary elective total hip and knee arthroplasties, they are used frequently in Dutch hospitals. This study aims to assess the impact of barriers associated with the intention of physicians to stop BSMs.

**STUDY DESIGN AND METHODS:** A survey among 400 orthopedic surgeons and 400 anesthesiologists within the Netherlands was performed. Multivariate logistic regression was used to identify barriers associated with intention to stop BSMs.

**RESULTS:** A total of 153 (40%) orthopedic surgeons and 100 (27%) anesthesiologists responded. Of all responders 67% used EPO, perioperative blood salvage, or a combination. After reading the evidence on non-cost-effective BSMs, 50% of respondents intended to stop



EPO and 53% to stop perioperative blood salvage. In general, barriers perceived most frequently were lack of attention for blood management (90% of respondents), department priority to prevent transfusions (88%), and patient characteristics such as comorbidity (81%). Barriers significantly associated with intention to stop EPO were lack of interest to save money and the impact of other involved parties. Barriers significantly associated with intention to stop perioperative blood salvage were concerns about patient safety, lack of alternatives, losing experience with the technique, and lack of interest to save money.

**CONCLUSION:** Physicians experience barriers to stop using BSMs, related to their own technical skills, patient safety, current blood management policy, and lack of interest to save money. These barriers should be targeted in strategies to make BSM use cost-effective.

PMID: 24797267

### **Postoperative hemoglobin levels and its association with myocardial ischemia in non-cardiac surgical patients.**

**Zarroy O**, Hoeks SE, Valentijn T, Leendertse-Verloop K, Van Klei WA, Jan Stolker R, Van Lier F. *Minerva Anesthesiol.* 2014 Feb;80(2):204-10. Epub 2013 Nov 27.

Comment in Assessing association between postoperative hemoglobin levels and myocardial ischemic events. [*Minerva Anesthesiol.* 2014]

Postoperative hemoglobin levels and their association with myocardial ischemia in non-cardiac surgical patients. [*Minerva Anesthesiol.* 2014]

**BACKGROUND:** Low hemoglobin (Hb) levels as well as cardiac complications are common conditions in postoperative surgical patients and both are associated with poor outcome. The aim of this study was to determine the influence of postoperative Hb levels on myocardial ischemia in high-risk patients who underwent non-cardiac surgery.

**METHODS:** In this retrospective observational cohort study, we evaluated 3638 consecutive patients admitted to the 24-hour postoperative anesthesia care unit between 2006 and 2010; 273 (8%) high-risk patients, defined as three or more cardiac risk factors, were selected for analyses. Postoperative Hb levels were divided into tertiles (low, intermediate and high). The endpoint of this study was myocardial ischemia which was defined as new electrocardiographic abnormalities and/or elevated levels of troponin-T. The relationship between postoperative Hb levels and myocardial ischemia was assessed using logistic regression analyses stratified by gender.

**RESULTS:** Postoperative myocardial ischemia was present in 73 (27%) of the 273 patients. After adjustment for significant pre-, intra- and postoperative risk factors, 4 independent risk factors remained for postoperative myocardial ischemia in male patients: age (OR 1.1; 95% CI: 1.0-1.1), a history of ischemic heart diseases (OR 4.2; 95% CI: 1.0-17.8), renal failure (OR 5.4; 95% CI: 2.1-13.9) and postoperative Hb levels: intermediate tertile (10.3-11.6 g/dL) (OR 5.8; 95% CI: 1.6-20.9) and lowest tertile (7.9-10.2 g/dL) (OR 12.9; 95% CI: 3.0-55.5).

**CONCLUSION:** Postoperative Hb levels are independently associated with postoperative myocardial ischemia in high-risk patients undergoing non-cardiac surgery.

PMID: 24280826

### **Coaching Reduced the Radiation Dose of Pain Physicians by Half during Interventional Procedures.**

**Slegers AS, Gültuna I, Aukes JA, van Gorp EJ, Blommers FM, Niehof SP, Bosman J.**

Pain Pract. 2014 Oct 29. doi: 10.1111/papr.12251. [Epub ahead of print]

The increased use of C-arm fluoroscopy in interventional pain management has led to higher radiation exposure for pain physicians. This study investigated whether or not real-time radiation dose feedback with coaching can reduce the scatter dose received by pain physicians. Firstly, phantom measurements were made to create a scatter dose profile, which visualizes the average scatter radiation for different C-arm positions at 3 levels of height. Secondly, in the clinical part, the radiation dose received by pain physicians during pain treatment procedures was measured real-time to evaluate (1) the effect of real-time dose feedback on the received scatter dose, and (2) the effect of knowledge of the scatter dose profile and active coaching, on the scatter dose received by the pain physician. The clinical study included 330 interventional pain procedures. The RESULTS showed that real-time feedback of the received dose did not lead to a reduction in scatter radiation. However, visualization of the scatter dose in a scatter dose profile and active coaching on optimal positions did reduce the scatter radiation received by pain physicians during interventional pain procedures by 46.4% ( $P = 0.05$ ). Knowledge of and real-time coaching with the scatter dose profile reduced the dose of pain physicians by half, caused by their increased awareness for scatter radiation and their insight into strategic positioning.

PMID: 25354342

## **Adoption of prasugrel into routine practice: rationale and design of the Rijnmond Collective Cardiology Research (CCR) study in percutaneous coronary intervention for acute coronary syndromes.**

Yetgin T, van der Linden MM, **de Vries AG**, Smits PC, Boersma E, van Geuns RJ, Zijlstra F; CCR Study Investigators.

Neth Heart J. 2014 Feb;22(2):55-61. doi: 10.1007/s12471-013-0472-1

**BACKGROUND:** Platelet inhibition is crucial in reducing both short- and long-term atherothrombotic risks in patients with acute coronary syndromes (ACS) managed with percutaneous coronary intervention (PCI). Based on randomised trials, recent recommendations in the current guidelines include the endorsement of prasugrel as a first-choice adenosine diphosphate receptor inhibitor. Yet, there is limited experience with the use of prasugrel in routine practice.

**METHODS:** The Rijnmond Collective Cardiology Research (CCR) registry is a prospective, observational study that will follow-up 4000 PCI-treated ACS patients in the larger region of Rotterdam, the Netherlands. Based on recently implemented hospital protocols, all patients will receive prasugrel as first-choice antiplatelet agent, unless contraindicated, in accordance with European guidelines, and will be followed for up to 1 year post-discharge for longitudinal assessment of outcomes and bleeding events. This registry exemplifies a collaborative study design that employs a regional PCI registry platform and provides feedback to participating sites regarding their practice patterns, thereby supporting and promoting improvement of quality of care.

**CONCLUSION:** The CCR registry will evaluate the adoption of prasugrel into routine clinical practice and thus, will provide important evidence with regard to the benefits and risks of real-world utilisation of prasugrel as antiplatelet therapy in PCI-treated ACS patients.

PMID: 24072688

## **Comparison of 3 biodegradable polymer and durable polymer-based drug-eluting stents in all-comers (BIO-RESORT): rationale and study design of the randomized TWENTE III multicenter trial.**

Lam MK, Sen H, Tandjung K, van Houwelingen KG, **de Vries AG**, Danse PW, Schotborgh CE, **Scholte M**, Löwik MM, Linssen GC, Ijzerman MJ, van der Palen J, Doggen CJ, von Birgelen C. Am Heart J. 2014 Apr;167(4):445-51. doi: 10.1016/j.ahj.2013.11.014. Epub 2014 Jan 6.

**AIM:** To evaluate the safety and efficacy of 2 novel drug-eluting stents (DES) with biodegradable polymer-based coatings versus a durable coating DES.

**METHODS AND RESULTS:** BIO-RESORT is an investigator-initiated, prospective, patient-blinded, randomized multicenter trial in 3540 Dutch all-comers with various clinical syndromes, requiring percutaneous coronary interventions (PCI) with DES implantation. Randomization (stratified for diabetes mellitus) is being performed in a 1:1:1 ratio between ORSIRO sirolimus-eluting stent with circumferential biodegradable coating, SYNERGY everolimus-eluting stent with abluminal biodegradable coating, and RESOLUTE INTEGRITY zotarolimus-eluting

stent with durable coating. The primary endpoint is the incidence of the composite endpoint target vessel failure at 1 year, consisting of cardiac death, target vessel-related myocardial infarction, or clinically driven target vessel revascularization. Power calculation assumes a target vessel failure rate of 8.5% with a 3.5% non-inferiority margin, giving the study a power of 85% ( $\alpha$  level .025 adjusted for multiple testing). The impact of diabetes mellitus on post-PCI outcome will be evaluated. The first patient was enrolled on December 21, 2012.

**CONCLUSIONS:** BIO-RESORT is a large, prospective, randomized, multicenter trial with three arms, comparing two DES with biodegradable coatings versus a reference DES with a durable coating in 3540 all-comers. The trial will provide novel insights into the clinical outcome of modern DES and will address the impact of known and so far undetected diabetes mellitus on post-PCI outcome.

PMID: 24655691

### **Current discharge management of acute coronary syndromes: data from the Rijnmond Collective Cardiology Research (CCR) study.**

Yetgin T, van der Linden MM, **de Vries AG**, Smits PC, van Mechelen R, Yap SC, Boersma E, Zijlstra F, van Geuns RJ; CCR Study Investigators.

Neth Heart J. 2014 Jan;22(1):20-7. doi: 10.1007/s12471-013-0484-x.

**BACKGROUND:** Medical discharge management of acute coronary syndromes (ACS) remains suboptimal outside randomised trials and constitutes an essential quality benchmark for ACS. We sought to evaluate the rates of key guideline-recommended pharmacological agents after ACS and characteristics associated with optimal treatment at discharge.

**METHODS:** The Rijnmond Collective Cardiology Research (CCR) registry is an ongoing prospective, observational study in the Netherlands that aims to enrol 4000 patients with ACS. We examined discharge and 1-month follow-up medication use among the first 1000 patients enrolled in the CCR registry. Logistic regression was performed to identify patient and hospital characteristics associated with collective guideline-recommended pharmacotherapy at hospital discharge.

**RESULTS:** At discharge, 94 % of patients received aspirin, 100 % thienopyridines, 80 % angiotensin-converting enzyme inhibitors/angiotensin-II receptor blockers, 87 %  $\beta$ -blockers, 96 % statins, and 65 % the combination of all 5 agents. ST-segment elevation myocardial infarction, hypertension, hypercholesterolaemia, and enrolment in an interventional centre were positive independent predictors of 5-drug combination therapy at discharge. Negative independent predictors were unstable angina and advanced age.

**CONCLUSION:** Current data from the CCR registry reflect a high quality of care for ACS discharge management in the Rotterdam-Rijnmond region. However, potential still remains for further optimisation.

PMID: 24155103

### **Predicting the size of pulmonary arteriovenous malformations on chest computed tomography: a role for transthoracic contrast echocardiography.**

Velthuis S, Buscarini E, Mager JJ, Vorselaars VM, **van Gent MW4**, Gazzaniga P, Manfredi G, Danesino C, Diederik AL, Vos JA, Gandolfi S, Snijder RJ, Westermann CJ, Post MC.

Eur Respir J. 2014 Jul;44(1):150-9. doi: 10.1183/09031936.00133713. Epub 2014 Mar 6.

This study aimed to investigate whether pulmonary shunt grade on transthoracic contrast echocardiography (TTCE) predicts the size of pulmonary arteriovenous malformations

(PAVMs) on chest computed tomography (CT) and subsequent feasibility for transcatheter embolotherapy. We prospectively included 772 persons with possible or definite hereditary haemorrhagic telangiectasia, who underwent both TTCE and chest CT for screening of PAVMs. A quantitative three-point grading scale was used to classify the pulmonary shunt size on TTCE (grade 1-3). Transcatheter embolotherapy was performed for PAVMs deemed large enough for endovascular closure on chest CT. TTCE documented pulmonary shunting in 510 (66.1%) patients. The positive predictive value of a pulmonary shunt grade 1, 2 and 3 on TTCE for presence of PAVMs on chest CT was 13.4%, 45.3% and 92.5%, respectively ( $p < 0.001$ ). None of the 201 persons with a pulmonary shunt grade 1 on TTCE had PAVMs on chest CT large enough for transcatheter embolotherapy, while 38 (25.3%) and 123 (77.4%) individuals with a pulmonary shunt grade 2 and 3 on TTCE, respectively, underwent endovascular closure of PAVMs. Pulmonary shunt grade on TTCE predicts the size of PAVMs on chest CT and their feasibility for subsequent transcatheter embolotherapy. Chest CT can be safely withheld from all persons with a pulmonary shunt grade 1 on TTCE, as any PAVM found in these subjects will be too small for transcatheter embolotherapy.

PMID: 24603816

### **Sexuality of patients with chronic heart failure and their spouses and the need for information regarding sexuality.**

**Driel AG**, de Hosson MJ, Gamel C. Eur J Cardiovasc Nurs. 2014 Jun;13(3):227-34. doi: 10.1177/1474515113485521. Epub 2013 Apr 10.

**BACKGROUND:** Psychological and physiological effects of chronic heart failure (CHF) can influence sexuality. Both CHF patients and their partners may experience changes and have questions about sexuality. Despite this, healthcare professionals give little information regarding sexuality. This may be due to the paucity of literature describing patients' concerns and questions about sexuality and CHF.

**AIMS:** The aims of this study were to describe the sexuality of patients and their partners and to describe their needs for information regarding sexuality. **METHODS:** A prospective, descriptive cross-sectional design was used. A convenience sample was obtained in three hospitals (Belgian and the Netherlands). Patients and partners completed two questionnaires: Sexual Adjustment Scale (SAS) and the Needs of Sexual Counseling Scale for Chronic Heart Failure (NSCS-CHF).

**RESULTS:** There were 52 patients and 32 partners who participated in the study. No or slight disturbance was seen in sexual discussions and intimacy. Marked or serious disturbance was reported in sexual activity. A mixed profile was seen in sexual performance, sexual interest and sexual pleasure. The majority of patients with CHF and their partners want information regarding sexuality. The NSCS-CHF clearly identified the information needs of patients and partners and most needs concerned the areas of symptoms, the relationship and relaxation. **CONCLUSION:** The questionnaires were easy to complete and changes in sexuality and information needs were identified. The NSCS-CHF needs further validation as a research instrument. Healthcare professionals can use both questionnaires to bring up the topic of sexuality and to identify topics that require further discussion or counselling with patients and partners. **KEYWORDS:** Chronic heart failure; information needs; partners; sexuality.

PMID: 23575920

### Cardiac metastasis of malignant melanoma: a case report.

**Aerts BR, Kock MC, Kofflard MJ, Plaisier PW.**

Neth Heart J. 2014 Jan;22(1):39-41. doi: 10.1007/s12471-013-0441-8.

The heart is regularly involved in metastatic neoplasms with cardiac metastases being found in up to 20 % of autopsies. We present a case about a 42-year-old Caucasian female with a fatal metastatic melanoma to the heart. The five- year survival rate for stage IV melanoma (melanoma with metastases to other organs) is 15 to 20 %. If patients with malignant melanoma present with new onset of cardiac symptoms, clinicians should always be aware of the possibility of cardiac metastases and perform further investigations.

PMID: 23821495

### Relation of highly sensitive cardiac troponin T in hypertrophic cardiomyopathy to left ventricular mass and cardiovascular risk.

Cramer G, **Bakker J**, Gommans F, Brouwer M, **Kurvers M**, **Fouraux M**, Verheugt F, **Kofflard M**. Am J Cardiol. 2014 Apr 1;113(7):1240-5. doi: 10.1016/j.amjcard.2013.12.033. Epub 2014 Jan 16.

Elevated cardiac troponin can be seen in patients with left ventricular (LV) hypertrophy and in asymptomatic subjects with a high a priori risk of cardiovascular disease (CVD). In hypertrophic cardiomyopathy (HC) troponin can be detected as well, but little is known about the contribution of LV mass, on the one hand, and the long-term risk of CVD, on the other. In an observational single-center study of 62 patients with HC, without a history of CVD, we assessed the Framingham Heart 10-year risk score (FH10yrs), LV mass index (LVMI) using magnetic resonance imaging, and highly sensitive cardiac troponin T (hs-cTnT). Hs-cTnT (>3 ng/L) was detectable in 74% of patients (46 of 62). Hs-cTnT was elevated in 26% (16 of 62) of patients (ninety-ninth percentile reference limit of 14 ng/L or more). From 3 to 14 ng/L, patients were older, more often had hypertension, and the FH10yrs was higher. Hs-cTnT correlated positively with LVMI ( $p < 0.001$ ) and maximal wall thickness ( $p < 0.001$ ). In addition, LVMI and hypertension were independently associated with increasing hs-cTnT concentrations in linear regression. Using multivariate binary logistic regression, both LVMI and FH10yrs were independently associated with detectable hs-cTnT levels. In contrast, only LVMI was associated with elevated hs-cTnT levels. In CONCLUSION, hs-cTnT was detectable in 3 quarters and elevated in a quarter of our patients with HC. Although detectable hs-cTnT is associated with both LV mass and CVD risk, elevated hs-cTnT relates to LV mass only. This indicates that hypertrophy more than the risk of CVD seems the most important drive for hs-cTnT to occur in these patients.

PMID: 24513467

## **Cardiac metastasis of malignant melanoma: a case report.**

**Aerts BR, Kock MC, Kofflard MJ, Plaisier PW.**

Neth Heart J. 2014 Jan;22(1):39-41. doi: 10.1007/s12471-013-0441-8.

The heart is regularly involved in metastatic neoplasms with cardiac metastases being found in up to 20 % of autopsies. We present a case about a 42-year-old Caucasian female with a fatal metastatic melanoma to the heart. The five-year survival rate for stage IV melanoma (melanoma with metastases to other organs) is 15 to 20 %. If patients with malignant melanoma present with new onset of cardiac symptoms, clinicians should always be aware of the possibility of cardiac metastases and perform further investigations.

PMID: 23821495

## **Abdominal rectus muscle atrophy and midline shift after colostomy creation.**

Timmermans L, Deerenberg EB, van Dijk SM, **Lamme B**, Koning AH, Kleinrensink GJ, Jeekel J, Lange JF.

Surgery. 2014 Apr;155(4):696-701. doi: 10.1016/j.surg.2013.12.033. Epub 2014 Jan 3.

**INTRODUCTION:** Incisional hernia (IH) can be attributed to multiple factors. The presence of a parastomal hernia has shown to be a risk factor for IH after midline laparotomy. Our hypothesis is that this increased risk of IH may be caused by changes in biomechanical forces, such as midline shift to the contralateral side of the colostomy owing to decreased restraining forces at the site of the colostomy, and left abdominal rectus muscle (ARM) atrophy owing to intercostal nerve damage.

**METHODS:** Patients were selected if they underwent end-colostomy via open operation between 2004 and 2011. Patients were eligible if computed tomography (CT) had been performed postoperatively. If available, preoperative CTs were collected for case-control analyses. Midline shift was measured using V-scope application in the I-space, a CAVE-like virtual reality system. For the ARM atrophy hypothesis, measurements of ARM were performed at the level of colostomy, and 3 and 8 cm cranial and caudal of the colostomy.

**RESULTS:** Postoperative CT were available for 77 patients; of these patients, 30 also had a preoperative CT. Median follow-up was 19 months. A mean shift to the right side was identified after preoperative and postoperative comparison; from  $-1.3 \pm 4.6$  to  $2.1 \pm 9.3$  ( $P = .043$ ). Furthermore, during rectus muscle measurements, a thinner left ARM was observed below the level of colostomy.

**DISCUSSION:** Creation of a colostomy alters the abdominal wall. Atrophy of the left ARM was seen caudal to the level of the colostomy, and a midline shift to the right side was evident on CT. These changes may explain the increased rate of IH after colostomy creation.

PMID: 24582494

### **Adductor longus tendon rupture mistaken for incarcerated inguinal hernia.**

**Aerts BR, Plaisier PW, Jakma TS.**

Injury. 2014 Mar;45(3):639-41. doi: 10.1016/j.injury.2013.10.049. Epub 2013 Nov 12.

An incarcerated inguinal hernia is a common diagnosis, since the risk of an inguinal hernia incarcerating or strangulating is around 0.3-3%. An acute rupture of the adductor longus tendon is rarely seen and mostly affects (semi-) professional sportsmen. We present a case of a patient with an assumed incarcerated inguinal hernia which turned out to be a proximal adductor longus tendon rupture. If patients without a history of inguinal hernia present themselves with acute groin pain after suddenly exorotating the upper leg, a rupture of the adductor longus tendon should be considered. Both surgical and non-surgical treatment can be performed.

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KEYWORDS: Adductor longus rupture; Differential diagnosis; Inguinal hernia; Treatment

PMID: 24360075

### **Anatomy education and classroom versus laparoscopic dissection-based training: a randomized study at one medical school.**

**ten Brinke B, Klitsie PJ,** Timman R, Busschbach JJ, Lange JF, Kleinrensink GJ.

Acad Med. 2014 May;89(5):806-10. doi: 10.1097/ACM.0000000000000223.

PURPOSE: Anatomy education on embalmed specimens is presumed to have added educational value. However, although embalmed specimens have been used for anatomy education for years, there is little evidence on the added educational value of dissection-based teaching. The OBJECTIVE of this randomized study is to examine the added value of dissection-based teaching, using models of the inguinal region in embalmed specimens.

METHOD: In 2011, medical students at Erasmus Medical Center, The Netherlands, were randomly assigned to three groups. Group I attended lectures, group II attended dissection-based training using laparoscopic dissection models, and group III attended lectures as well as dissection-based laparoscopic training. To assess the improvement of anatomical knowledge, all students had to complete a practical test before, immediately after, and two weeks after training. Data were analyzed with mixed modeling.

RESULTS: Forty-six students participated in this study. No significant difference in results was observed among the three groups before the start of training. Immediately after the course, groups II and III scored significantly higher than group I ( $P < .001$ ;  $P < .001$ ), and group II scored higher than group III ( $P = .009$ ). The difference between group I and groups II and III persisted during follow-up ( $P = .012$ ;  $P = .001$ ). The difference between groups II and III disappeared.

CONCLUSION: Three-dimensional anatomy education with dissection models enhances anatomy learning by medical students. Students who received dissection-based training scored higher in the short- and long term compared with students who did not receive this type of education.

PMID: 24667502



### Clinical studies on intra-abdominal hypertension and abdominal compartment syndrome.

Atema JJ, van Buijtenen JM, **Lamme B**, Boermeester MA.

J Trauma Acute Care Surg. 2014 Jan;76(1):234-40. doi: 10.1097/TA.0b013e3182a85f59.

PMID: 24368386

### Fewer Cancer Reoperations for Medullary Thyroid Cancer After Initial Surgery According to ATA Guidelines.

Verbeek HH, **Meijer JA**, Zandee WT, Kramp KH, Sluiter WJ, Smit JW, Kievit J, Links TP, Plukker JT.

Ann Surg Oncol. 2014 Oct 15. [Epub ahead of print]

**BACKGROUND:** Surgery is still the only curative treatment for medullary thyroid cancer (MTC). We evaluated clinical outcome in patients with locoregional MTC with regard to adequacy of treatment following ATA guidelines and number of sessions to first intended curative surgery in different hospitals.

**METHODS:** We reviewed all records of MTC patients (n = 184) treated between 1980 and 2010 in two tertiary referral centers in the Netherlands. Symptomatic MTC (palpable tumor or suspicious lymphadenopathy) patients without distant metastasis were included (n = 86). Patients were compared with regard to adequacy of surgery according to ATA recommendations, tumor characteristics, number of local cancer reoperations, biochemical cure, clinical disease-free survival (DFS), overall survival (OS), and complications.

**RESULTS:** Adherence to ATA guidelines resulted in fewer cancer-related reoperations (0.24 vs. 0.60; P = 0.027) and more biochemical cure (40.9 vs. 20 %; P = 0.038). Surgery according to ATA-guidelines on patients treated in referral centers was significantly more often adequate (59.2 vs. 26.7 %; P = 0.026). Tumor size and LN+ were the most important predictors for clinical recurrence [relative risk (RR) 4.1 (size > 40 mm) 4.1 (LN+) and death (RR 4.2 (size > 40 mm) 8.1 (LN+)].

**CONCLUSION:** ATA-compliant surgery resulted in fewer local reoperations and more biochemical cure. Patients in referral centers more often underwent adequate surgery according to ATA-guidelines. Size and LN+ were the most important predictors for DFS and OS.

PMID: 25316487

### Gene expression profiling to predict the risk of locoregional recurrence in breast cancer: a pooled analysis.

**Drukker CA**, Elias SG, Nijenhuis MV, Wesseling J, Bartelink H, Elkhuizen P, Fowble B, Whitworth PW, Patel RR, de Snoo FA, van 't Veer LJ, Beitsch PD, Rutgers EJ.

Breast Cancer Res Treat. 2014 Dec;148(3):599-613. doi: 10.1007/s10549-014-3188-z.

Epub 2014 Nov 21

The 70-gene signature (MammaPrint) has been developed to predict the risk of distant metastases in breast cancer and select those patients who may benefit from adjuvant treatment. Given the strong association between locoregional and distant recurrence, we hypothesize that the 70-gene signature will also be able to predict the risk of locoregional recurrence (LRR). 1,053 breast cancer patients primarily treated with breast-conserving treatment or mastectomy at the Netherlands Cancer Institute between 1984 and 2006 were included. Adjuvant treatment consisted of radiotherapy, chemotherapy, and/or endocrine

therapy as indicated by guidelines used at the time. All patients were included in various 70-gene signature validation studies. After a median follow-up of 8.96 years with 87 LRRs, patients with a high-risk 70-gene signature (n = 492) had an LRR risk of 12.6% (95% CI 9.7-15.8) at 10 years, compared to 6.1% (95% CI 4.1-8.5) for low-risk patients (n = 561; P < 0.001). Adjusting the 70-gene signature in a competing risk model for the clinicopathological factors such as age, tumour size, grade, hormone receptor status, LVI, axillary lymph node involvement, surgical treatment, endocrine treatment, and chemotherapy resulted in a multi-variable HR of 1.73 (95% CI 1.02-2.93; P = 0.042). Adding the signature to the model based on clinicopathological factors improved the discrimination, albeit non-significantly [C-index through 10 years changed from 0.731 (95% CI 0.682-0.782) to 0.741 (95% CI 0.693-0.790)]. Calibration of the prognostic models was excellent. The 70-gene signature is an independent prognostic factor for LRR. A significantly lower local recurrence risk was seen in patients with a low-risk 70-gene signature compared to those with high-risk 70-gene signature.

PMID: 25414025

### Is microvessel density correlated with anastomotic leakage after low anterior resection?

**Schouten SB**, De Bruin AF, Gosselink MP, Nigg AL, van Iterson M, Biermann K, Kliffen M, van der Harst E.

Hepatology. 2014 Jan-Feb;61(129):90-3.

**BACKGROUND:** Anastomotic leakage after low anterior resection may be the result of poor vascular supply from the proximal anastomotic loop. The purpose of this study was to investigate the correlation between colonic microvessel density and anastomotic breakdown.

**METHODOLOGY:** Between 2006 and 2009, a consecutive series of 81 patients underwent double-stapled low anterior resection followed by a colorectal anastomosis. Symptomatic anastomotic leakage occurred in 14 patients (17%). In these patients, microvascular density was determined by image analysis of CD-31-immunostained sections from the proximal resection site. The results were compared with a sample of the remaining 67 patients without anastomotic leakage closely matched for age, gender, ASA-classification, pathological stage and neoadjuvant treatment.

**RESULTS:** The mean percentage of anti-CD31 stained area, obtained from the proximal resection site was similar between patients with or without anastomotic leakage (4.0% +/- 1.8% versus 4.4% +/- 1.6% respectively, P = 0.53). With respect to neo-adjuvant therapy, no differences in the density of CD31 positive were observed (pre-operative radiotherapy = 4.3% +/- 1.8% versus pre-operative chemoradiotherapy 4.1% +/- 1.6%, P = 0.77). The mean vessel density reached borderline statistical significance in women (5.0% +/- 1.8%) compared to men (3.8% +/- 1.8%) (P = 0.06).

**CONCLUSION:** Microvessel density quantification with immunohistochemical analysis of CD31 expression of the proximal anastomotic region did not show any correlation with anastomotic leakage in the clinical setting.

PMID: 24895800

### Medial femoral condyle fracture as an intraoperative complication of Oxford unicompartmental knee replacement.

**Ten Brinke B**, de Haan LJ, Koenraadt KL, van Geenen RC.

Knee Surg Sports Traumatol Arthrosc. 2014 Dec 6. [Epub ahead of print]

Oxford unicompartmental knee replacement (OUKR) is associated with a low perioperative complication rate. This case report describes a periprosthetic fracture of the medial femoral condyle that occurred during an OUKR. The patient was treated with a non-weight-bearing long leg cast for 6 weeks. Afterwards, the fracture had healed, and 3 months postoperatively, there was a full range of motion. Factors leading to this complication could be the impaction force or direction, or a diminished load resistance of the distal femur. Minimally displaced coronal periprosthetic fractures after OUKR can be managed conservatively without residual functional impairment.

LEVEL OF EVIDENCE: Case report, Level IV.

PMID: 25480430

### **Parastomal hernia is an independent risk factor for incisional hernia in patients with end colostomy.**

Timmermans L, Deerenberg EB, **Lamme B**, Jeekel J, Lange JF.

Surgery. 2014 Jan;155(1):178-83. doi: 10.1016/j.surg.2013.06.014. Epub 2013 Nov 12.

**BACKGROUND:** Incisional hernia (IH) is the most frequent complication after abdominal operation, with an incidence of 11-20% and up to 35% in risk groups. Known risk groups for IH are abdominal aortic aneurysm and obesity. Our hypothesis is that parastomal hernia (PH) might also represent a risk factor for developing IH. Identifying risk factors can help determine the need for preventive measures such as primary mesh augmentation.

**METHODS:** In a multicenter cross-sectional study, all patients who were operated between 2002 and 2010 by means of a Hartmann procedure or abdominoperineal resection were invited for a follow-up visit to our outpatient clinic. Primary outcome measures were the prevalence of IH and PH. All possible risk factors for IH were scored. A physical examination was performed and, when available, computed tomography was scored for IH and PH.

**RESULTS:** A total of 150 patients were seen in the outpatient clinic. The median follow-up was 49 months (range, 30-75). IH had a prevalence of 37.1%, and PH had a prevalence of 52.3% during physical examination. On CT the prevalence was even greater, ie, 48.3% and 52.9%. IH and PH were both present in the same patient in 30% of all examined and in 35.6% after CT examination. PH was found to be a risk factor for IH on univariate and multivariate logistic regression analyses of variance, with an odds ratio of 7.2 (95% confidence interval 3.3-15.7). In addition, an emergency operation was found to be a risk factor for IH with an odds ratio of 5.8 in the multivariate analyses.

**CONCLUSION:** Patients with a PH have a 7 times greater chance of developing an IH compared to patients without PH.

PMID: 24238119

### **Performance indicators for lung cancer surgery in the Netherlands**

**Damhuis RA**, Maat AP2, **Plaisier PW**

Eur J Cardiothorac Surg. 2014 Sep 3. pii: ezu329. [Epub ahead of print]. doi: 10.1093/ejcts/ezu329

**KEYWORDS:** Hospital volume; Lung cancer; Pneumonectomy; Postoperative mortality; Quality indicators

In the Netherlands, surgery for lung cancer is traditionally performed in low-volume hospitals.

To assess the need for centralization, we examined early outcome measures and compared RESULTS between hospitals and with other European countries.

PMID: 25187534

### Preoperative prediction of cosmetic RESULTS in breast conserving surgery.

Vos EL, Koning AH, Obdeijn IM, van Verschuer VM, Verhoef C, van der Spek PJ, **Menke-Pluijmers MB**, Koppert LB.

J Surg Oncol. 2014 Oct 20. doi: 10.1002/jso.23782. [Epub ahead of print]

**BACKGROUND:** Preoperative OBJECTIVE predictions of cosmetic result after breast conserving surgery (BCS) has the potential to aid in surgical treatment decision making. Our aim was to investigate the predictive value of tumor volume in relation to breast volume (TV/BV ratio) for cosmetic result.

**METHODS:** Sixty-nine invasive breast cancer women with preoperative MRI and treated by BCS and radiotherapy in 2007-2012 were prospectively included. Simple excision or basic oncoplastic techniques were used, but no volume displacement. TV/BV ratio was measured in the MRI while 3D-projected in virtual reality environment (I-Space). Cosmetic result was assessed by patient questionnaire, panel evaluation, and breast retraction assessment (BRA). Quality-of-life was assessed by EORTC QLQ-C30 and BR23.

**RESULTS:** Intraobserver and interobserver correlation coefficients for tumor and breast volume were all >0.95. Increasing TV/BV ratio correlated with decreasing cosmetic result as determined by patient, panel, and BRA. TV/BV ratio was a significant independent predictor for the panel evaluation ( $P=0.028$ ), as was tumor location ( $P<0.05$ ), and together they constituted a good prediction model (AUC 0.83).

**CONCLUSION:** TV/BV ratio was a precise and independent predictor for cosmetic result determined by a panel and can be used as preoperative prediction tool to enable more informed surgical treatment decision making. J. Surg. Oncol. © 2014 Wiley Periodicals, Inc.

**KEYWORDS:** breast cancer; breast volume; preoperative MRI; tumor volume; virtual reality system

PMID: 25332158

### Short-term morbidity and quality of life from a randomized clinical trial of close rectal dissection and total mesorectal excision in ileal pouch-anal anastomosis.

**Bartels SA**, Gardenbroek TJ, Aarts M, Ponsioen CY, Tanis PJ, Buskens CJ, Bemelman WA.

Br J Surg. 2015 Feb;102(3):281-7. doi: 10.1002/bjs.9701. Epub 2014 Dec 23.

**BACKGROUND:** Posterior rectal dissection during ileal pouch-anal anastomosis (IPAA) can be performed in the total mesorectal excision (TME) or close rectal dissection (CRD) plane. The aim of this study was to compare morbidity and quality of life (QoL) in patients having TME or CRD during proctectomy followed by IPAA for benign disease. **METHODS:** In this randomized clinical trial, patients undergoing IPAA were allocated to TME or CRD. Thirty-day morbidity was determined and QoL assessed using Short Form 36, GIQLI (GastroIntestinal Quality of Life Index) and COREFO (COloREctal Functional Outcome) questionnaires. The primary outcome (pouch compliance) of the trial is to be reported separately.

**RESULTS:** Fifty-nine patients were included, 28 in the CRD and 31 in the TME group. Baseline data were similar, except for more previous abdominal surgery in the TME group. Operating

time was longer for patients having CRD (195 min versus 166 min for TME;  $P=0.008$ ). More patients in the TME group had a primary defunctioning ileostomy (7 of 31 versus 1 of 28 for CRD;  $P=0.055$ ). Severe complications occurred more frequently in the TME group (10 of 31 versus 2 of 28 for CRD). QoL was better in the CRD group for several subscales of the questionnaires measured at 1, 3 and 6 months after surgery. At 12 months, QoL was similar in the two groups for all subscales.

**CONCLUSION:** CRD led to a lower severe complication rate and better short-term QoL than wide TME.

PMID: 25533307

### **Small bowel obstruction, incisional hernia and survival after laparoscopic and open colonic resection (Lafa study).**

**Bartels SA**, Vlug MS, Hollmann MW, Dijkgraaf MG, Ubbink DT, Cense HA, van Wagenveld BA, Engel AF, Gerhards MF, Bemelman WA; Collaborative Lafa Study Group.

Br J Surg. 2014 Aug;101(9):1153-9. doi: 10.1002/bjs.9585. Epub 2014 Jun 30.

**BACKGROUND:** Short-term advantages to laparoscopic surgery are well described. This study compared medium- to long-term outcomes of a randomized clinical trial comparing laparoscopic and open colonic resection for cancer.

**METHODS:** The case notes of patients included in the Lafa study (perioperative strategy in colonic surgery; Laparoscopy and/or Fast track multimodal management versus standard care) were reviewed 2-5 years after randomization for incisional hernia, adhesional small bowel obstruction (SBO), overall survival, cancer recurrence and quality of life (QoL). The laparoscopic and open groups were compared irrespective of fast-track or standard perioperative care.

**RESULTS:** Data on incisional hernias, SBO, survival and recurrence were available for 399 of 400 patients: 208 laparoscopic and 191 open resections. These outcomes were corrected for duration of follow-up. Median follow-up was 3.4 (i.q.r. 2.6-4.4) years. Multivariable regression analysis showed that open resection was a risk factor for incisional hernia (odds ratio (OR) 2.44, 95 per cent confidence interval (c.i.) 1.12 to 5.26;  $P=0.022$ ) and SBO (OR 3.70, 1.07 to 12.50;  $P=0.039$ ). There were no differences in overall survival (hazard ratio 1.10, 95 per cent c.i. 0.67 to 1.80;  $P=0.730$ ) or in cumulative incidence of recurrence ( $P=0.514$ ) between the laparoscopic and open groups. There were no measured differences in QoL in 281 respondents ( $P>0.350$  for all scales).

**CONCLUSION:** Laparoscopic colonic surgery led to fewer incisional hernia and adhesional SBO events.

**REGISTRATION NUMBER:** NTR222 (<http://www.trialregister.nl>).

PMID: 24977342

### **The Photodynamic Bone Stabilization System: a minimally invasive, percutaneous intramedullary polymeric osteosynthesis for simple and complex long bone fractures.**

**Vegt P**, Muir JM, Block JE.

Med Devices (Auckl). 2014 Dec 12;7:453-61. doi: 10.2147/MDER.S71790. eCollection 2014.

The treatment of osteoporotic long bone fractures is difficult due to diminished bone density and compromised biomechanical integrity. The majority of osteoporotic long bone fractures occur in the metaphyseal region, which poses additional problems for surgical repair due to

increased intramedullary volume. Treatment with internal fixation using intramedullary nails or plating is associated with poor clinical outcomes in this patient population. Subsequent fractures and complications such as screw pull-out necessitate additional interventions, prolonging recovery and increasing health care costs. The Photodynamic Bone Stabilization System (PBSS) is a minimally invasive surgical technique that allows clinicians to repair bone fractures using a light-curable polymer contained within an inflatable balloon catheter, offering a new treatment option for osteoporotic long bone fractures. The unique polymer compound and catheter application provides a customizable solution for long bone fractures that produces internal stability while maintaining bone length, rotational alignment, and postsurgical mobility. The PBSS has been utilized in a case series of 41 fractures in 33 patients suffering osteoporotic long bone fractures. The initial RESULTS indicate that the use of the light-cured polymeric rod for this patient population provides excellent fixation and stability in compromised bone, with a superior complication profile. This paper describes the clinical uses, procedural details, indications for use, and the initial clinical findings of the PBSS.

**KEYWORDS:** bone density; long bone fracture; orthopaedics; osteoporosis; polymeric rod; surgery

*PMID: 25540600*

### **Validity and Reliability of Global Operative Assessment of Laparoscopic Skills (GOALS) in Novice Trainees Performing a Laparoscopic Cholecystectomy.**

Kramp KH, van Det MJ, Hoff C, Lamme B, Veeger NJ, Pierie JP.

Journal of Surgical Education, DOI: <http://dx.doi.org/10.1016/j.jsurg.2014.08.006>

Available online 16 October 2014

#### **Purpose**

Global Operative Assessment of Laparoscopic Skills (GOALS) assessment has been designed to evaluate skills in laparoscopic surgery. A longitudinal blinded study of randomized video fragments was conducted to estimate the validity and reliability of GOALS in novice trainees. **METHODS:** In total, 10 trainees each performed 6 consecutive laparoscopic cholecystectomies. Sixty procedures were recorded on video. Video fragments of (1) opening of the peritoneum; (2) dissection of Calot's triangle and achievement of critical view of safety; and (3) dissection of the gallbladder from the liver bed were blinded, randomized, and rated by 2 consultant surgeons using GOALS. Also, a grade was given for overall competence. The correlation of GOALS with live observation

**OBJECTIVE:** Structured Assessment of Technical Skills (OSATS) scores was calculated. Construct validity was estimated using the Friedman 2-way analysis of variance by ranks and the Wilcoxon signed-rank test. The interrater reliability was calculated using the absolute and consistency agreement 2-way random-effects model intraclass correlation coefficient. **RESULTS:** A high correlation was found between mean GOALS score ( $r = 0.879$ ,  $p = 0.021$ ) and mean OSATS score. The GOALS score increased significantly across the 6 procedures ( $p = 0.002$ ). The trainees performed significantly better on their sixth when compared with their first cholecystectomy ( $p = 0.004$ ). The consistency agreement interrater reliability was 0.37 for the mean GOALS score ( $p = 0.002$ ) and 0.55 for overall competence ( $p < 0.001$ ) of the 3 video fragments.

**CONCLUSION:** The validity observed in this randomized blinded longitudinal study supports the existing evidence that GOALS is a valid tool for assessment of novice trainees. A relatively low reliability was found in this study.

**Key words:** laparoscopy; trainee; assessment; videotape recording; laparoscopic cholecystectomy

Competencies: Practice-Based Learning and Improvement; Interpersonal and Communication Skills; Systems-Based Practice

PMID: 25441259

### **Magnetic Resonance Imaging in Patients with Unilateral Bloody Nipple Discharge; Useful When Conventional Diagnostics are Negative?**

**van Gelder L, Bisschops RH, Menke-Pluymers MB, Westenend PJ, Plaisier PW.**

World J Surg. 2014 Aug 15. [Epub ahead of print]

**BACKGROUND:** Unilateral bloody nipple discharge (UBND) is mostly caused by benign conditions such as papilloma or ductal ectasia. However, in 7-33 % of all nipple discharge, it is caused by breast cancer. Conventional diagnostic imaging like mammography (MMG) and ultrasonography (US) is performed to exclude malignancy. Preliminary investigations of breast magnetic resonance imaging (MRI) assume that it has additional value. With an increasing availability of MRI, it is of clinical importance to evaluate this. We evaluated the additional diagnostic value of MRI in patients with UBND in the absence of a palpable mass, with normal conventional imaging.

**METHODS:** All women with UBND in the period November 2007-July 2012 were included. In addition to the standard work-up (patient's history, physical examination, MMG, and US), MRI was performed. Data from these examinations and treatment were collected retrospectively.

**RESULTS:** A total of 111 women (mean age 52 years; range 23-80) were included. In nine (8 %) patients, malignancy was suspected on MRI while conventional imaging was normal. In eight (89 %) of these patients, histology was obtained, two by core biopsy and six by terminal duct excision. Benign conditions were found in six patients (86 %) and a (pre-) malignant lesion in two patients. In both cases, it concerned a ductal carcinoma in situ, which was treated with breast-conserving therapy. Moreover, in two cases of (pre)malignancy, the MRI was interpreted as negative.

**CONCLUSION:** In patients with UBND who show no signs of a malignancy on conventional diagnostic examinations, the added value of a breast MRI is limited, since a malignancy can be demonstrated in <2 %.

PMID: 25123174

### **Prophylactic nipple-sparing mastectomy leaves more terminal duct lobular units in situ as compared with skin-sparing mastectomy.**

van Verschuer VM, van Deurzen CH, **Westenend PJ**, Rothbarth J, Verhoef C, Luiten EJ, **Menke-Pluymers MB**, Koppert LB.

Am J Surg Pathol. 2014 May;38(5):706-12. doi: 10.1097/PAS.0000000000000180.

Eur J Cancer. 2014; 50 suppl 2: S149

Prophylactic skin-sparing mastectomy (SSM) is associated with major breast cancer risk reduction in high-risk patients. In prophylactic nipple-sparing mastectomy (NSM) it is unknown how many terminal duct lobular units (TDLUs) remain behind the nipple-areola complex (NAC) additionally to those behind the skin flap. Therefore, safety of NSM can be doubted. We compared amounts of TDLUs behind the NAC as compared with the skin. In prophylactic SSM and conventional therapeutic mastectomy patients, the NAC and an adjacent skin island (SI) were resected as if it were an NSM. NAC and SI were serially sectioned perpendicularly

to the skin and analyzed for the amount of TDLUs present. Slides of NAC and SI were scanned, and slide surface areas (cm) were measured. TDLUs/cm in NAC versus SI specimen, representing TDLU density, were analyzed pairwise. In total, 105 NACs and SIs of 90 women were analyzed. Sixty-four NACs (61%) versus 25 SIs (24%) contained  $\geq 1$  TDLUs. Median TDLU density was higher in NAC specimens (0.2 TDLUs/cm) as compared with SI specimens (0.0 TDLUs/cm;  $P < 0.01$ ). Independent risk factors for the presence of TDLUs in the NAC specimen were younger age and parity (vs. nulliparity). The finding of higher TDLU density behind the NAC as compared with the skin flap suggests that sparing the NAC in prophylactic NSM in high-risk patients possibly may increase postoperative breast cancer risk as compared with prophylactic SSM. Studies with long-term follow-up after NSM are warranted to estimate the level of residual risk.

*PMID: 24698963*



## Enteric-coated mycophenolate sodium in psoriasis vulgaris: an open pilot study.

Fallah Arani S, Waalboer Spuij R, Nijsten T, Neumann HA, Thio B.

J Dermatolog Treat. 2014 Feb;25(1):46-9. doi: 10.3109/09546634.2012.723124. Epub 2013 Jan 20.

**BACKGROUND:** Mycophenolate mofetil is a well-known immunosuppressive agent in transplantation medicine. The efficacy of enteric-coated mycophenolate sodium (EC-MPS) was confirmed in other inflammatory skin diseases, including atopic dermatitis and SCLE.

**OBJECTIVE:** To investigate the efficacy and the tolerability/short-term safety of EC-MPS in patients with moderate to severe chronic plaque psoriasis.

**PATIENTS AND METHODS:** An open-label pilot study in which 20 patients with a PASI >10 received EC-MPS 720 mg twice daily for 6 weeks followed by 360 mg twice daily for another 6 weeks. Patients who completed 12 weeks of treatment were followed-up for an additional 12 weeks. Treatment outcomes were assessed with PASI50% and PASI75%.

**RESULTS:** Eighteen men and two women (mean age 46 years) entered the study. Sixty-five percent (13/20) finished the treatment period. By week 6, no patient achieved PASI 75% and 8/20 patients achieved a PASI 50%. Compared to week 6, 4/13 showed a deterioration of their psoriasis at week 12. Twenty-five percent (2/8) achieved a PASI 75% in week 24. The most-reported adverse events were itching (30%), diarrhea (10%), and a reversible elevation of the triglycerides level.

**CONCLUSION:** EC-MPS does not seem effective as monotherapy for moderate to severe psoriasis, but might be used at a dosage of 1440 mg daily in well-selected patients with treatment-resistant psoriasis.

PMID: 22998609

## How we started performing endovenous thermal ablation procedures: a personal history.

Kockaert M, Nijsten T.

Lasers Med Sci. 2014 Mar;29(2):383-5. doi: 10.1007/s10103-013-1462-7. Epub 2014 Jan 5.

This story is a personal journey of two Dutch dermatologists pioneering in the field of endovenous laser ablation of varicose veins, illustrating how innovations find their way in medicine and, in particular, in surgical specialties. After the introduction of these thermal ablative procedures in 2001, we have fully embraced these minimally invasive techniques, and in the process, we have increased our understanding on its mechanism of action and confirmed the clinical relevance of treating varicose veins with endovenous laser ablation.

In 2013, thermal ablation is considered a standard of care by physicians as well as patients with varicose veins.

PMID: 24390054

### The effectiveness of finasteride and dutasteride used for 3 years in women with androgenetic alopecia.

**Boersma IH**, Oranje AP, Grimalt R, Iorizzo M, Piraccini BM, Verdonshot EH.

Indian J Dermatol Venereol Leprol. 2014 Nov-Dec;80(6):521-5. doi: 10.4103/0378-6323.144162.

**BACKGROUND:** The effectiveness of finasteride and dutasteride in women with androgenetic alopecia has been the subject of debate.

**AIM:** To evaluate the effectiveness of finasteride and dutasteride on hair loss in women with androgenetic alopecia over a period of 3 years.

**METHODS:** From a database containing systematically retrieved data on 3500 women treated for androgenetic alopecia between 2002 and 2012 with finasteride 1.25 mg or dutasteride 0.15 mg, a random sample stratified for age and type of medication was taken to yield 30 women in two age categories: below and above 50 years, and for both medications. Hair thickness of the three thinnest hairs was measured from standardized microscopic images at three sites of the scalp at the start of the treatment and after 3 years of continuous medication intake. The macroscopic images were evaluated independently by three European dermatologists/hair experts. The diagnostic task was to identify the image displaying superior density of the hair.

**RESULTS:** Both age categories showed a statistically significant increase in hair thickness from baseline over the 3-year period for finasteride and dutasteride (signed rank test,  $P=0.02$ ). Hair thickness increase was observed in 49 (81.7%) women in the finasteride group and in 50 (83.3%) women in the dutasteride group. On average, the number of post-treatment images rated as displaying superior density was 124 (68.9%) in the finasteride group, and 118 (65.6%) in the dutasteride group. Dutasteride performed statistically significantly better than finasteride in the age category below 50 years at the central and vertex sites of the scalp.

**CONCLUSION:** Finasteride 1.25 mg and dutasteride 0.15 mg given daily for 3 years effectively increased hair thickness and arrested further deterioration in women with androgenetic alopecia.

*PMID: 25382509*

### Treatment of psoriasis with non-registered fumaric acid esters in The Netherlands: a nationwide survey among Dutch dermatologists.

**Fallah Arani S**, Balak DM, Neumann HA, Kuipers MV, Thio HB.

J Eur Acad Dermatol Venereol. 2014 Jul;28(7):972-5. doi: 10.1111/jdv.12205. Epub 2013 Jul 3.

**BACKGROUND:** Psoriasis vulgaris is a T-cell mediated disease that affects 2-3% of the worldwide white-skinned population. Fumaric acid esters are mentioned as an effective therapy for moderate-to-severe psoriasis vulgaris in adult patients in the new guidelines for psoriasis treatment.

**OBJECTIVES:** To obtain an insight into the use of fumaric acid esters by Dutch dermatologists in the Netherlands.

**METHODS:** This was a cross-sectional postal survey. An anonymous survey was posted to all Dutch dermatologists. In this survey, data were collected on the extent of fumaric acid esters use, the reasons for use, the reasons for non- or limited use of fumaric acid esters, the perception of fumaric acid esters as a mono-therapy with regards to the effectiveness, the safety, the adverse events and the overall satisfaction of fumaric acid esters as a mono-therapy.

**RESULTS:** Sixty-three per cent of the 300 responders indicated to prescribe fumaric acid

esters for the treatment of psoriasis. About 37% of the dermatologists indicated (almost) never to prescribe it. Biologicals were considered as the most effective therapy. Fumaric acid esters were regarded as the safest therapy. They were generally well-tolerated by the patients similar to that for methotrexate according to the respondents.

**CONCLUSION:** A large proportion of the dermatologists in our survey indicated to prescribe fumaric acid esters. It is considered to be effective, safe and without adverse events profile that is favourable in the practice, also as compared with other systemic therapies such as methotrexate and biologicals.

*PMID: 23822581*

## **Can neonatal sepsis be predicted in late preterm premature rupture of membranes? Development of a prediction model.**

van der Ham DP, van Kuijk S, Opmeer BC, Willekes C, van Beek JJ, Mulder AL, van Loon AJ, Groenewout M, Mantel GD, Bloemenkamp KW, Porath M, Kwee A, **Akerboom BM**, Papatsonis DN, Metz GC, Nijhuis JG, Mol BW; PPROMEXIL trial group.

Eur J Obstet Gynecol Reprod Biol. 2014 May;176:90-5. doi:10.1016/j.ejogrb.2014.02.003. Epub 2014 Feb 13.

**OBJECTIVE:** Women with late preterm premature rupture of membranes (PROM) have an increased risk that their child will develop neonatal sepsis. We evaluated whether neonatal sepsis can be predicted from antepartum parameters in these women.

**STUDY DESIGN:** We used multivariable logistic regression to develop a prediction model.

Data were obtained from two recent randomized controlled trials on induction of labor versus expectant management in late preterm PROM (PPROMEXIL trials, (ISRCTN29313500 and ISRCTN05689407). Data from randomized as well as non-randomized women, who consented to the use of their medical data, were used. We evaluated 13 potential antepartum predictors for neonatal sepsis. Missing data were imputed. Discriminative ability of the model was expressed as the area under the receiver operating characteristic (ROC) curve and a calibration with both a calibration plot and the Hosmer and Lemeshow goodness-of-fit test. Overall performance of the prediction model was quantified as the scaled Brier score.

**RESULTS:** We studied 970 women. Thirty-three (3.4%) neonates suffered neonatal sepsis. Maternal age (OR 1.09 per year), maternal CRP level (OR 1.01 per mmol/l), maternal temperature (OR 1.80 per °C) and positive GBS culture (OR 2.20) were associated with an increased risk of neonatal sepsis. The model had an area under the ROC-curve of 0.71. The model had both a good calibration and accuracy.

**CONCLUSION:** Antepartum parameters aid in the more precise prediction of the risk of neonatal sepsis in women with late preterm PPROM.

PMID: 24630296

## **Economic analysis comparing induction of labor and expectant management in women with preterm prelabor rupture of membranes between 34 and 37 weeks (PPROMEXIL trial).**

Vijgen SM, van der Ham DP, Bijlenga D, van Beek JJ, Bloemenkamp KW, Kwee A, Groenewout M, Kars MM, Kuppens S, Mantel G, Molkenboer JF, Mulder AL, Nijhuis JG, Pernet PJ, Porath M, Woiski MD, Weinans MJ, van Wijngaarden WJ, Wildschut HI, **Akerboom B**, Sikkema JM, Willekes C, Mol BW, Opmeer BC; PPROMEXIL study group.

Acta Obstet Gynecol Scand. 2014 Apr;93(4):374-81. doi: 10.1111/aogs.12329. Epub 2014 Jan 29.

**OBJECTIVE:** To compare the costs of induction of labor and expectant management in women with preterm prelabor rupture of membranes (PPROM).

**DESIGN:** Economic analysis based on a randomized clinical trial.

SETTING: Obstetric departments of eight academic and 52 non-academic hospitals in the Netherlands.

POPULATION: Women with PPRM near term who were not in labor 24 h after PPRM.

METHODS: A cost-minimization analysis was done from a health care provider perspective, using a bottom-up approach to estimate resource utilization, valued with unit-costs reflecting actual costs.

MAIN OUTCOME MEASURES: Primary health outcome was the incidence of neonatal sepsis. Direct medical costs were estimated from start of randomization to hospital discharge of mother and child.

RESULTS: Induction of labor did not significantly reduce the probability of neonatal sepsis [2.6% vs. 4.1%, relative risk 0.64 (95% confidence interval 0.25-1.6)]. Mean costs per woman were €8094 for induction and €7340 for expectant management (difference €754; 95% confidence interval -335 to 1802). This difference predominantly originated in the postpartum period, where the mean costs were €5669 for induction vs. €4801 for expectant management. Delivery costs were higher in women allocated to induction than in women allocated to expectant management (€1777 vs. €1153 per woman). Antepartum costs in the expectant management group were higher because of longer antepartum maternal stays in hospital.

CONCLUSION: In women with pregnancies complicated by PPRM near term, induction of labor does not reduce neonatal sepsis, whereas costs associated with this strategy are probably higher.

PMID: 24392746

### **Elevated early follicular progesterone levels and in vitro fertilization outcomes: a prospective intervention study and meta-analysis**

Hamdine O, Macklon NS, Eijkemans MJ, Laven JS, Cohlen BJ, Verhoeff A, van Dop PA, Bernardus RE, Lambalk CB, Oosterhuis GJ, Holleboom CA, **van den Dool-Maasland GC**, Verburg HJ, van der Heijden PF, Blankhart A, Fauser BC, Broekmans FJ; CETRO trial study group.

Fertil Steril. 2014 Aug;102(2):448-454.e1. doi: 10.1016/j.fertnstert.2014.05.002. Epub 2014 Jun 11.

OBJECTIVE: To assess the impact of elevated early follicular progesterone (P) levels in gonadotropin-releasing hormone (GnRH) antagonist cycles on clinical outcome using prospective data in combination with a systematic review and meta-analysis.

DESIGN: Nested study within a multicenter randomized controlled trial and a systematic review and meta-analysis.

SETTING: Reproductive medicine center in an university hospital.

PATIENT(S): 158 in vitro fertilization/intracytoplasmic sperm injection (IVF-ICSI) patients.

INTERVENTION(S): Recombinant follicle-stimulating hormone (FSH) (150-225 IU) administered daily from cycle day 2 onward; GnRH antagonist treatment randomly started on cycle day 2 or 6; assignment into two groups according to P level on cycle day 2: normal or elevated (>4.77 nmol/L or >1.5 ng/mL, respectively).

MAIN OUTCOME MEASURE(S): Ongoing pregnancy rate (OPR) per started cycle.

RESULT(S): The incidence of elevated P was 13.3%. A non-statistically-significant difference in OPR was present between the normal and elevated P groups (27.0% vs. 19.0%). No differential impact of early or late GnRH antagonist initiation on the effect of elevated or normal P on OPR was observed. A systematic search of Medline and EMBASE from 1972-2013 was performed to identify studies analyzing elevated early P levels in GnRH antagonists. The

meta-analysis (n=1,052) demonstrated that elevated P levels statistically significantly decreased the OPR with 15% (95% CI -23, -7 %). Heterogeneity across the studies, presumably based on varying protocols, may have modulated the effect of elevated P.

CONCLUSION: From the present meta-analysis it appears that early elevated P levels are associated with a lower OPR in GnRH antagonists. The incidence of such a condition, however, is low.

CLINICAL TRIAL REGISTRATION NUMBER: NCT00866034.

PMID: 24929258

### Prediction of postpartum hemorrhage in women with gestational hypertension or mild preeclampsia at term.

Koopmans CM, van der Tuuk K, Groen H, Doornbos JP, de Graaf IM, van der Salm PC, Porath MM, Kuppens SM, Wijnen EJ, Aardenburg R, van Loon AJ, **Akerboom BM**, van der Lans PJ, Mol BW, van Pampus MG; HYPITAT study group.

Acta Obstet Gynecol Scand. 2014 Apr;93(4):399-407. doi: 10.1111/aogs.12352.

OBJECTIVE: To assess whether postpartum hemorrhage can be predicted in women with gestational hypertension or mild preeclampsia at term.

DESIGN: A cohort study in which we used data from our multicentre randomized controlled trial (HYPITAT trial).

SETTING: The study was conducted in 38 hospitals in the Netherlands between 2005 and 2008.

POPULATION: Women with gestational hypertension or mild preeclampsia at term (n = 1132).

METHODS: An antepartum model (model A) and an antepartum/intrapartum model (model B) were created using logistic regression. The predictive capacity of the models was assessed with receiver operating characteristic analysis and calibration.

MAIN OUTCOME MEASURE: Postpartum hemorrhage, defined as blood loss >1000 mL within 24 h after delivery.

RESULTS: Postpartum hemorrhage occurred in 118 (10.4%) women. Maternal age (odds ratio 1.03), prepregnancy body mass index (odds ratio 0.96), and women with preeclampsia (odds ratio 1.5) were independent antepartum prognostic variables of postpartum hemorrhage.

Intrapartum variables incorporated in the model were gestational age at delivery (odds ratio 1.2), duration of dilatation stage (odds ratio 1.1), and episiotomy (odds ratio 1.5). Model A and model B showed moderate discrimination, with areas under the receiver operating characteristic curve of 0.59 (95% confidence interval 0.53-0.64) and 0.64 (95% confidence interval 0.59-0.70), respectively. Calibration was moderate for model A (Hosmer-Lemeshow p = 0.26) but better for model B (Hosmer-Lemeshow p = 0.36). The rates of postpartum hemorrhage ranged from 4% (lowest 10%) to 22% (highest 10%).

CONCLUSION: In the assessment of performance of a prediction model, calibration is more important than discriminative capacity. Our prediction model shows that for women with gestational hypertension or mild preeclampsia at term, distinction between low and high risk of developing postpartum hemorrhage is possible when antepartum and intrapartum variables are combined.

KEYWORDS: Preeclampsia; calibration; gestational hypertension; predictive value; prognostic model; receiver-operating characteristic curve analysis

PMID: 24575790

**The Dutch national summit on preconception care: a summary of definitions, evidence and recommendations.**

Temel S, van Voorst SF, de Jong-Potjer LC, Waelpuut AJ, Cornel MC, **de Weerd SR**, Denktas S, Steegers EA.

J Community Genet. 2015 Jan;6(1):107-15. doi: 10.1007/s12687-014-0204-2. Epub 2014 Nov 14.

PMID: 25394755

**Transfusion policy after severe postpartum haemorrhage: a randomised non-inferiority trial.**

Prick BW, Jansen AJ, Steegers EA, Hop WC, Essink-Bot ML, Uyl-de Groot CA, **Akerboom BM**, van Alphen M, Bloemenkamp KW, Boers KE, Bremer HA, Kwee A, van Loon AJ, Metz GC, Papatsonis DN, van der Post JA, Porath MM, Rijnders RJ, Roumen FJ, Scheepers HC, Schippers DH, Schuitemaker NW, Stigter RH, Woiski MD, Mol BW, van Rhenen DJ, Duvekot JJ. BJOG. 2014 Jul;121(8):1005-14. doi: 10.1111/1471-0528.12531. Epub 2014 Jan 10.

**OBJECTIVE:** To assess the effect of red blood cell (RBC) transfusion on quality of life in acutely anaemic women after postpartum haemorrhage.

**DESIGN:** Randomised non-inferiority trial.

**SETTING:** Thirty-seven Dutch university and general hospitals.

**POPULATION:** Women with acute anaemia (haemoglobin 4.8-7.9 g/dl [3.0-4.9 mmol/l] 12-24 hours postpartum) without severe anaemic symptoms or severe comorbidities.

**METHODS:** Women were allocated to RBC transfusion or non-intervention.

**MAIN OUTCOME MEASURES:** Primary outcome was physical fatigue 3 days postpartum (Multidimensional Fatigue Inventory, scale 4-20; 20 represents maximal fatigue). Non-inferiority was demonstrated if the physical fatigue difference between study arms was maximal 1.3. Secondary outcomes were health-related quality of life and physical complications. Health-related quality of life questionnaires were completed at five time-points until 6 weeks postpartum.

**RESULTS:** In all, 521 women were randomised to non-intervention (n = 262) or RBC transfusion (n = 259). Mean physical fatigue score at day 3 postpartum, adjusted for baseline and mode of delivery, was 0.8 lower in the RBC transfusion arm (95% confidence interval: 0.1-1.5, P = 0.02) and at 1 week postpartum was 1.06 lower (95% confidence interval: 0.3-1.8, P = 0.01). A median of two RBC units was transfused in the RBC transfusion arm.

In the non-intervention arm, 33 women received RBC transfusion, mainly because of anaemic symptoms. Physical complications were comparable.

**CONCLUSION:** Statistically, non-inferiority could not be demonstrated as the confidence interval crossed the non-inferiority boundary. Nevertheless, with only a small difference in physical fatigue and no differences in secondary outcomes, implementation of restrictive management seems clinically justified.

PMID: 24405687

**Using vaginal Group B Streptococcus colonisation in women with preterm premature rupture of membranes to guide the decision for immediate delivery: a secondary analysis of the PPROMEXIL trials**

Tajik P, van der Ham D, Zafarmand M, Hof M, Morris J, Franssen M, de Groot C, Duvekot J, Oudijk M, Willekes C, Bloemenkamp K, Porath M, Woiski M, **Akerboom B**, Sikkema J, Bijvank BN, Mulder A, Bossuyt P, Mol B.  
BJOG. 2014 Sep;121(10):1263-73. doi: 10.1111/1471-0528.12889. Epub 2014 May 27.

To investigate whether vaginal Group B Streptococcus (GBS) colonisation or other baseline characteristics of women with preterm premature rupture of membranes (PPROM) can help in identifying subgroups of women who would benefit from immediate delivery.

*PMID: 24862166*

**The diagnostic value of routine antenatal ultrasound in screening for congenital uropathies.**

**Anne M. de Grauw**, Herman T. den Dekker, **Amerik C. de Mol**, and **Sabina Rombout-de Weerd**

The Journal of Maternal-Fetal & Neonatal Medicine, Ahead of Print : Pages 1-5. doi: 10.3109/14767058.2014.996125

*PMID: 25540953*



## 15-year follow-up of a multicenter, randomized, calcineurin inhibitor withdrawal study in kidney transplantation.

Roodnat JI, Hilbrands LB, Hené RJ, de Sévaux RG, **Smak Gregoor PJ**, Kal-van Gestel JA, Konijn C, van Zuilen A, van Gelder T, Hoitsma AJ, Weimar W. Transplantation. 2014 Jul 15;98(1):47-53. doi: 10.1097/01.TP.0000442774.46133.71.

**BACKGROUND:** Calcineurin inhibitors (CNIs) are essential immunosuppressive drugs after renal transplantation. Because of nephrotoxicity, withdrawal has been a challenge since their introduction.

**METHODS:** A randomized multicenter trial included 212 kidney patients transplanted between 1997 and 1999. All patients were initially treated with mycophenolate mofetil (MMF), cyclosporine A (CsA), and prednisone (pred). At 6 months after transplantation, 63 patients were randomized for MMF/pred, 76 for MMF/CsA, and 73 for MMF/CsA/pred. Within 18 months after randomization 23 patients experienced a rejection episode: MMF/pred (27.0%), MMF/CsA (6.8%) and MMF/CsA/pred (1.4%) ( $P < 0.001$ ).

**RESULTS:** During 15 years of follow-up, 73 patients died with a functioning graft, and 43 patients lost their graft. Ninety-six were alive with a functioning graft. Intention-to-treat analysis did not show a significant difference in patient and graft survival. In multivariate analysis, death-censored graft survival was significantly associated with serum creatinine at 6 months after transplantation and maximum PRA but not with the randomization group. CNI withdrawal did not result in a reduced incidence of or death by malignancy or cardiovascular disease. Death-censored graft survival was significantly worse in those patients randomized for CNI withdrawal that had to be reverted to CNI. Independent of randomization group, compared with no rejection, death-censored graft survival was significantly worse in 23 patients with acute rejection after randomization.

**CONCLUSION:** Fifteen years after conversion to a CNI free regimen, there was no benefit regarding graft and patient survival or regarding prevalence of or death by comorbidities. However, rejection shortly after CNI withdrawal was associated with decreased graft survival.

PMID: 24521775

## Histological and Clinical Findings in Patients with Post-Transplantation and Classical Encapsulating Peritoneal Sclerosis: A European Multicenter Study

Latus J, **Habib SM**, Kitterer D, **Korte MR**, Ulmer C, Fritz P, Davies S, Lambie M, Alscher MD, Betjes MG, Segerer S, Braun N; European EPS study group. PLoS One. 2014 Aug 29;9(8):e106511. doi: 10.1371/journal.pone.0106511. eCollection 2014.

**BACKGROUND:** Encapsulating peritoneal sclerosis (EPS) commonly presents after peritoneal dialysis has been stopped, either post-transplantation (PT-EPS) or after switching to hemodialysis (classical EPS, cEPS). The aim of the present study was to investigate whether PT-EPS and cEPS differ in morphology and clinical course.

**METHODS:** In this European multicenter study we included fifty-six EPS patients, retrospectively paired-matched for peritoneal dialysis (PD) duration. Twenty-eight patients developed

EPS after renal transplantation, whereas the other twenty-eight patients were classical EPS patients. Demographic data, PD details, and course of disease were documented. Peritoneal biopsies of all patients were investigated using histological criteria.

**RESULTS:** Eighteen patients from the Netherlands and thirty-eight patients from Germany were included. Time on PD was 78(64-95) in the PT-EPS and 72(50-89) months in the cEPS group ( $p>0.05$ ). There were no significant differences between the morphological findings of cEPS and PT-EPS. Podoplanin positive cells were a prominent feature in both groups, but with a similar distribution of the podoplanin patterns. Time between cessation of PD to the clinical diagnosis of EPS was significantly shorter in the PT-EPS group as compared to cEPS (4(2-9) months versus 23(7-24) months,  $p<0.001$ ). Peritonitis rate was significantly higher in cEPS.

**CONCLUSION:** In peritoneal biopsies PT-EPS and cEPS are not distinguishable by histomorphology and immunohistochemistry, which argues against different entities. The critical phase for PT-EPS is during the first year after transplantation and therefore earlier after PD cessation than in cEPS.

PMID: 25171219

### **Osteoporotic vertebral fractures during pregnancy: be aware of a potential underlying genetic cause.**

Campos-Obando N, Oei L, Hoefsloot LH, **Kiewiet RM**, Klaver CC, Simon ME, Zillikens MC. J Clin Endocrinol Metab. 2014 Apr;99(4):1107-11. doi: 10.1210/jc.2013-3238. Epub 2014 Jan 13.

**CONTEXT:** Although the baby growing in its mother's womb needs calcium for skeletal development, osteoporosis and fractures very rarely occur during pregnancy.

**CASE PRESENTATION:** A 27-year-old woman in the seventh month of her first pregnancy contracted midthoracic back pain after lifting an object. The pain was attributed to her pregnancy, but it remained postpartum. Her past medical history was uneventful, except for severely reduced vision of her left eye since birth. Family history revealed that her maternal grandmother had postmenopausal osteoporosis and her half-brother had three fractures during childhood after minor trauma. Her height was 1.58 m; she had no blue sclerae or joint hyperlaxity. Laboratory examination including serum calcium, phosphate, alkaline phosphatase, creatinine,  $\beta$ -carboxyterminal cross-linking telopeptide of type I collagen, 25-hydroxyvitamin D, and TSH was normal. Multiple thoracic vertebral fractures were diagnosed on x-ray examination, and dual-energy x-ray absorptiometry scanning showed severe osteoporosis (Z-scores: L2-L4, -5.6 SD; femur neck, -3.9 SD). DNA analyses revealed two compound heterozygous missense mutations in LRP5. The patient's mother carried one of the LRP5 mutations and was diagnosed with osteoporosis. Her half-brother, treated with cabergoline for a microprolactinoma, also had osteoporosis of the lumbar spine on dual-energy x-ray absorptiometry and carried the same LRP5 mutation. The patient was treated with risedronate for 2.5 years. Bone mineral density and back pain improved. She stopped bisphosphonate use 6 months before planning a second pregnancy.

**CONCLUSION:** Our patient was diagnosed with osteoporosis pseudoglioma syndrome/familial exudative vitreoretinopathy. Potential underlying genetic causes should be considered in pregnancy-associated osteoporosis with implications for patients and relatives. More studies regarding osteoporosis treatment preceding conception are desirable.

PMID: 24423337

**Paclitaxel and bevacizumab with or without capecitabine as first-line treatment for HER2-negative locally recurrent or metastatic breast cancer: A multicentre, open-label, randomised phase 2 trial.**

Lam SW, de Groot SM, Honkoop AH, Jager A, Ten Tije AJ, Bos MM, Linn SC, **van den Bosch J**, Kroep JR, Braun JJ, van Tinteren H, Boven E; Dutch Breast Cancer Research Group (BOOG). Eur J Cancer. 2014 Oct 27;50(18):3077-3088. doi: 10.1016/j.ejca.2014.10.008. [Epub ahead of print]

**BACKGROUND:** The addition of bevacizumab to paclitaxel or capecitabine has demonstrated improved progression-free survival (PFS) and OBJECTIVE response rate (ORR) as compared with chemotherapy alone in patients with HER2-negative locally recurrent or metastatic breast cancer (LR/MBC). We evaluated the efficacy and safety of first-line therapy of paclitaxel and bevacizumab with or without capecitabine in patients with HER2-negative LR/MBC. **METHODS:** In this multicentre, open-label, randomised phase II trial, women with HER2-negative LR/MBC were randomly assigned in a 1:1 ratio to paclitaxel (90mg/m<sup>2</sup> intravenously [IV] on days 1, 8, and 15) and bevacizumab (10mg/kg IV on days 1 and 15) every 4weeks for six cycles, followed by bevacizumab (15mg/kg IV on day 1) every 3weeks (AT) or to paclitaxel (90mg/m<sup>2</sup> IV on days 1 and 8), bevacizumab (15mg/kg IV on day 1) and capecitabine (825mg/m<sup>2</sup> orally twice daily on days 1-14) every 3weeks for eight cycles, followed by bevacizumab and capecitabine at the same doses every 3weeks (ATX). The primary end-point was investigator-assessed PFS. Secondary end-points included ORR, duration of response, overall survival (OS) and safety. Exploratory analyses were conducted to evaluate the impact of capecitabine on OS and to validate a novel prognostic model. This trial is registered with EudraCT, number 2006-006058-83. **FINDINGS:** Median PFS was significantly longer in ATX as compared with AT (11.2months versus 8.4months; stratified hazard ratio (HR), 0.52; 95% confidence interval (CI), 0.41-0.67; p<0.0001). The ORR in ATX patients with measurable disease (n=268) was higher than that in AT (69% versus 51%; p=0.01). The median duration of response was 6.8 versus 5.4months for, respectively, ATX and AT (p<0.0001). Median OS was 24.2months for ATX and 23.1months for AT (p=0.53). The increased rate of grade 3-4 adverse events related to the addition of capecitabine, being hand-foot syndrome (34% versus 0% for AT) and neutropenia (20% versus 12% for AT), generally did not preclude continuation of treatment. Exploratory analyses indicated that 1) patients receiving capecitabine at some line for treatment have significantly improved OS and 2) a prognostic model can classify patients into three risk groups associated with OS. **INTERPRETATION:** In patients with HER2-negative LR/MBC, addition of capecitabine to paclitaxel and bevacizumab significantly improved PFS, ORR and response duration. This combination was reasonably well tolerated and may be considered of use as first-line treatment in rapidly progressive disease. **FUNDING:** F. Hoffmann-La Roche Ltd, the Netherlands.

**KEYWORDS:** Bevacizumab; Capecitabine; Metastatic breast cancer; Paclitaxel; Phase 2 trial

PMID: 25459393

**Potential prognostic implications of whole-body bone marrow MRI in diffuse large B-cell lymphoma patients with a negative blind bone marrow biopsy.**

Adams HJ, Kwee TC, Lokhorst HM, **Westerweel PE**, Fijnheer R, Kersten MJ, Verkooijen HM, Stoker J, Nievelstein RA.

J Magn Reson Imaging. 2014 Jun;39(6):1394-400. doi: 10.1002/jmri.24318. Epub 2013 Nov 14.

**PURPOSE:** To assess the prognostic implications of whole-body bone marrow MRI findings in diffuse large B-cell lymphoma (DLBCL) patients with a negative blind bone marrow biopsy (BMB). **MATERIALS AND METHODS:** Thirty-eight patients with newly diagnosed DLBCL and negative blind BMB prospectively underwent whole-body MRI (T1-weighted, T2-weighted short inversion time inversion recovery, and diffusion-weighted sequences), which were scored as positive or negative for lymphomatous bone marrow involvement. Proportions of patients who experienced disease relapse/progression or died during follow-up were calculated and compared between whole-body MRI-positive and whole-body MRI-negative patients. **RESULTS:** The median follow-up time of surviving patients was 973 days (range, 391-1655 days). Disease relapse/progression occurred in 33% (5/15) of patients with a positive whole-body MRI and in 13% (3/23) of patients with a negative whole-body MRI. In addition, 20% (3/15) of patients with a positive whole-body MRI died during follow-up, compared with 9% (2/23) of patients with a negative whole-body MRI. **CONCLUSION:** The RESULTS of this study show that disease relapse or progression and death may occur more frequently in whole-body MRI-positive patients than in whole-body MRI-negative patients, which suggests that whole-body bone marrow MRI findings in DLBCL patients with a negative BMB may have prognostic implications.

PMID: 24310955

### **Influence of C-reactive protein levels and age on the value of D-dimer in diagnosing pulmonary embolism.**

**Crop MJ, Siemes C, Berendes P, van der Straaten F, Willemsen S, Levin MD.**

Eur J Haematol. 2014 Feb;92(2):147-55. doi: 10.1111/ejh.12218. Epub 2013 Nov 22.

**BACKGROUND:** Recently, the number of performed CT-angiographies to diagnose pulmonary embolism (PE) rised markedly, while the incidence of PE hardly increased. This low yield of CT-angiography leads to more patients exposed to radiation and higher costs.

**AIM:** The diagnostic value of age, C-reactive protein (CRP) and D-dimer in PE was investigated. Additionally an age-adjusted D-dimer cutoff level [age-adjusted cutoff = age/100 mg/L] was compared with the conventional cutoff level in diagnosing PE for patients  $\geq 50$  yr.

**METHODS:** This observational study (2004-2007) included all consecutive patients suspected for PE presenting on the emergency department with a performed CT-angiography after measuring CRP and D-dimer levels.

**RESULTS:** Of 4609 patients suspected for PE, 1164 patients underwent CT-angiography of whom 309 (26.5%) had PE. Correlation between CRP and D-dimer was 0.42 ( $P < 0.001$ ). D-dimer and age correlated positively ( $r_s = 0.33$ ,  $P < 0.001$ ), but only in patients  $> 50$  yr and independent of PE. Multivariate regression analysis showed significant contribution of age, D-dimer and age-adjusted D-dimer for diagnosing PE, but not for CRP. Using an age-adjusted D-dimer cutoff value increased specificity from 37% to 50%, whereas sensitivity declined from 96% to 90%. Applying this age-adjusted cutoff level in patients  $\geq 70$  yr, specificity increased from 18% to 40%, while sensitivity decreased from 96% to 88%.

**CONCLUSION:** In the prediction of PE, age and D-dimer levels are relevant, while CRP level is not. Using an age-adjusted D-dimer cutoff in older patients remarkably improves the specificity of D-dimer testing with a minor decline in sensitivity. This may increase the yield of CT-angiography in diagnosing PE.

© 2013 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. **KEYWORDS:** C-reactive protein; D-dimer; age-adjusted cutoff; pulmonary embolism; sensitivity; specificity

PMID: 24164492

### Multiple elevated red spots in a woman with nausea, altered stools, and weight loss.

**Maas KS, van de Vrie W, Kuizinga MC.**

Clin Gastroenterol Hepatol. 2014 Jan;12(1):e1. doi: 10.1016/j.cgh.2013.05.022. Epub 2013 Jun 2.

PMID: 23735445

### Mesenteric panniculitis: prevalence, clinicoradiologic presentation and 5-year follow-up.

**van Putte-Katier N, van Bommel EF, Elgersma OE, Hendriksz TR.**

Br J Radiol. 2014 Oct 1:20140451. [Epub ahead of print]. DOI: <http://dx.doi.org/10.1259/bjr.20140451>

A more accurate prevalence of MP on CT is demonstrated. An underlying malignancy may play a role.

To determine prevalence, clinicoradiologic characteristics and outcome of patients with mesenteric panniculitis (MP) in a large hospital-based population.

PMID: 25271412

### Primary intraosseous manifestation of Rosai-Dorfman disease: 2 cases and review of literature.

**Duijsens HM, Vanhoenacker FM, ter Braak BP, Hogendoorn PC, Kroon HM.**

JBR-BTR. 2014 Mar-Apr;97(2):84-9.

Rosai-Dorfman disease (RDD) is a rare disorder of proliferative histiocytes with an unknown etiology. It is also known as sinus histiocytosis with massive lymphadenopathy. Most patients present with painless cervical lymphadenopathy due to accumulation of histiocytes in the lymph nodes, often in conjunction with fever, elevated leukocyte count and erythrocyte sedimentation rate. Isolated skeletal involvement is very rare.

PMID: 25073237

### Efficacy and complications of urinary drainage procedures in idiopathic retroperitoneal fibrosis complicated by extrinsic ureteral obstruction.

**Mertens S, Zeegers AG, Wertheimer PA, Hendriksz TR, van Bommel EF.**

Int J Urol. 2014 Mar;21(3):283-8. doi: 10.1111/iju.12234. Epub 2013 Aug 22.

**OBJECTIVE:** To investigate the efficacy and complications of urinary drainage procedures in patients with idiopathic retroperitoneal fibrosis complicated by ureteral obstruction.

**METHODS:** A retrospective study of 30 idiopathic retroperitoneal fibrosis patients involving 44 obstructed urinary units who underwent urinary drainage from January 2002 through April 2010 was carried out. Data of all diagnostic procedures, blood and urine cultures, and hospital admissions were collected and analyzed.

**RESULTS:** In 12 of 44 (27%) cases, percutaneous nephrostomy was carried out at the first step. Attempted ureteral stenting at the first step was successful in 25 of 32 (79%) cases, of which 20 (80%) cases could be managed successfully by ureteral stenting alone throughout the study period. Successful prolonged urinary drainage with percutaneous nephrostomy alone was accomplished in 10 cases, three at the first step and seven at the second step after

failed intraureteral stent insertion or after unsuccessful maintenance of urinary drainage with an intraureteral stent. A total of 21 urinary tract infection episodes occurred in 11 patients. The incidence and accumulated incidence of acute pyelonephritis was 0.062 episodes/100 person-days and 30%, respectively. The incidence and accumulated incidence of urosepsis was 0.015 episodes/100 person-days and 6.6%, respectively. The overall number of complications did not differ between external and internal urinary drainage procedures (percutaneous nephrostomy, 21% vs intraureteral stent, 17.9%;  $P=0.79$ ).

**CONCLUSION:** Both intraureteral stent and percutaneous nephrostomy placement are a safe way to relieve urinary obstruction in idiopathic retroperitoneal fibrosis patients, and they have comparable complication rates. Over time, the need for using both management options in the same patient might be required. Hence, these techniques should be regarded as complementary.

**KEYWORDS:** intraureteral stent; percutaneous nephrostomy; retroperitoneal fibrosis; urinary drainage

*PMID: 24033464*

## Clinical presentation and morbidity of contact lens-associated microbial keratitis: a retrospective study.

Hoddenbach JG, **Boekhoorn SS**, Wubbels R, Vreugdenhil W, Van Rooij J, Geerards AJ. Graefes Arch Clin Exp Ophthalmol. 2014 Feb;252(2):299-306. doi: 10.1007/s00417-013-2514-1. Epub 2013 Nov 27.

**PURPOSE:** To investigate the clinical presentation, isolated organism, treatment, and morbidity of contact lens-associated microbial keratitis needing hospitalization.

**METHODS:** This retrospective study included all consecutive patients with contact lens-associated microbial keratitis hospitalized in the Rotterdam Eye Hospital from January 1, 2005, to December 31, 2009. All data regarding epidemiological characteristics, clinical presentation, isolated organism, and treatment were collected from medical records.

**RESULTS:** There were 109 cases (108 patients) of contact lens-associated microbial keratitis hospitalized during the study period. Mean age was  $33.3 \pm 15.4$  (SD) years. *Pseudomonas aeruginosa* was the most frequently isolated microorganism (68.8 %), with minor resistance to gentamicin (2.7 %) and ofloxacin (1.3 %). At time of presentation, best corrected visual acuity (BCVA) was very poor, with the largest proportion of patients (65.1 %) seeing worse than 0.05 Snellen. After intensive treatment, the visual outcome improved considerably, with the largest proportion (67.0 %) achieving a  $BCVA \geq 0.7$  Snellen. Low BCVA at admission was significantly associated with a worse final BCVA. A total of 22 patients (20.2 %) required corneal transplantation (three emergency cases). Larger size of stromal infiltrate was significantly associated with the need for corneal transplantation.

**CONCLUSION:** Microbial keratitis is a serious complication of contact lens wear, with approximately one out of five hospitalized cases requiring corneal transplantation. Ofloxacin, or a combination of gentamicin and cephazolin, still appear to be excellent first-choice therapies in the Netherlands, as little resistance has developed to these antibiotics.

PMID: 24281783

# Kindergeneeskunde

## The diagnostic value of routine antenatal ultrasound in screening for congenital uropathies.

Anne M. de Grauw, Herman T. den Dekker, **Amerik C. de Mol**, and **Sabina Rombout-de Weerd**  
The Journal of Maternal-Fetal & Neonatal Medicine, Ahead of Print : Pages 1-5. doi:  
10.3109/14767058.2014.996125

**BACKGROUND:** Antenatal hydronephrosis (ANH) is characteristic for congenital obstructive abnormalities of the urinary tract (COAUT). COAUT is the most common cause of urinary tract infections (UTI's) in newborns. The prognosis of mild to moderate ANH is unclear. The aim of this study was to determine the diagnostic value of antenatal ultrasound screening for ANH in order to inform patients correctly.

**METHODS:** A retrospective cohort study over the period 2009–2011, evaluating all structural ultrasounds and proven cases of ANH. Also, evaluation of all patients diagnosed with UTIs caused by COAUT in the same period.

**RESULTS:** About 7003 children underwent antenatal screening. Of them, 0.7% (n=47) were diagnosed with ANH. In the same period, 257 children without ANH had a proven UTI. Of them, 4.3% (n=11) were diagnosed with COAUT, which was not found during antenatal screening. The predictive value of the antenatal ultrasound was higher in the third trimester than the second trimester (sensitivity 0.97 versus 0.62, respectively).

**CONCLUSION:** Antenatal ultrasound screening is a reliable method in diagnosing ANH. Third trimester scanning is more specific for diagnosing ANH than second trimester scanning. Our findings allow collaborating gynecologists and pediatricians to inform patients more accurately in the future after the antenatal detection of COAUT.

**Keywords:** Counseling, hydronephrosis, prenatal diagnosis, ultrasonography, urinary tract infections

PMID: 25540953

## [An acute vomiting infant with profuse diarrhoea: enterocolitis due to non-IgE-mediated cow's milk allergy].

## Een hevige spugende zuigeling met profuse diarree; Enterocolitis door niet-IgE-gemedieerde koemelkallergie.

van Puffelen E, **Vriesman AW, de Mol AC, Roosen YM**.  
Ned Tijdschr Geneeskd. 2014;158:A7313.

**BACKGROUND:** Food protein-induced enterocolitis is a manifestation of non-IgE-mediated cow's milk allergy, characterized by acute vomiting and profuse diarrhoea. This reaction is often not recognized as cow's milk allergy.

**CASE DESCRIPTION:** We present a 6-week-old, formula-fed girl with frequent vomiting, diarrhoea and failure to thrive. These symptoms disappeared after giving cow's milk-free formula. Forty-five minutes after the last dose in a non-blinded provocation test with cow's milk,



she developed profuse diarrhoea and vomiting, resulting in hypovolemic shock. No specific IgE against cow's milk was found.

CONCLUSION: Unusual in this case is the severe but relatively late reaction to the provocation test. In an acutely ill infant with vomiting, diarrhoea and pallor - which can even result in shock - food protein-induced enterocolitis as manifestation of non-IgE-mediated allergy must be considered. These symptoms start as late as 2 to 3 hours after exposure and disappear after withdrawal of the causal product.

PMID: 25027211

### [Clinical guideline 'Turner syndrome']. [Article in Dutch]

van den Akker EL, van Alfen AA, **Sas T**, Kerstens M, Cools M, Lambalk CB.  
Ned Tijdschr Geneesk. 2014;158:A7375.

Turner syndrome occurs in women who are missing one X chromosome. The most obvious symptoms are small stature and ovarian failure. Turner patients have an increased risk of a large number of disorders, and should therefore have lifelong medical supervision. Recent insights into patient management have been incorporated into the guidelines. Patients are increasingly involved in their own treatment. In patients with 45,X karyotype, Y-chromosomal material is actively sought in a larger number of cells and/or other tissues, using FISH. Pubertal induction therapy, if required, is initiated at an appropriate age. Egg donation or vitrification are new therapeutic options for fertility treatment. Monitoring for cardiac and vascular disease using cardiac ultrasound and MRI is performed more often, partly in connection with the risk of aortal dissection. The coordination of care of patients with Turner syndrome is concentrated in specialized centres in the Netherlands and Belgium.

PMID: 24666534

### Comparison of body surface area versus weight-based growth hormone dosing for girls with Turner syndrome.

Schrier L, de Kam ML, McKinnon R, Che Bakri A, Oostdijk W, **Sas TC**, Menke LA, Otten BJ, de Muinck Keizer-Schrama SM, Kristrom B, Ankarberg-Lindgren C, Burggraaf J, Albertsson-Wikland K, Wit JM.  
Horm Res Paediatr. 2014;81(5):319-30. doi: 10.1159/000357844. Epub 2014 Apr 23.

BACKGROUND/AIMS: Growth Hormone (GH) dosage in childhood is adjusted for body size, but there is no consensus whether body weight (BW) or body surface area (BSA) should be used. We aimed at comparing the biological effect and cost-effectiveness of GH treatment dosed per m<sup>2</sup> BSA in comparison with dosing per kg BW in girls with Turner syndrome (TS). METHODS: Serum IGF-I, GH dose, and adult height gain (AHG) from girls participating in two Dutch and five Swedish studies on the efficacy of GH were analyzed, and the cumulative GH dose and costs were calculated for both dose adjustment methods. Additional medication included estrogens (if no spontaneous puberty occurred) and oxandrolone in some studies. RESULTS: At each GH dose, the serum IGF-I standard deviation score remained stable over time after an initial increase after the start of treatment. On a high dose (at 1 m<sup>2</sup> equivalent to 0.056-0.067 mg/kg/day), AHG was at least equal on GH dosed per m<sup>2</sup> BSA compared with

dosing per kg BW. The cumulative dose and cost were significantly lower if the GH dose was adjusted for m<sup>2</sup> BSA.

**CONCLUSION:** Dosing GH per m<sup>2</sup> BSA is at least as efficacious as dosing per kg BW, and is more cost-effective.

PMID: 24776754

### **Components of the metabolic syndrome in early childhood in very-low-birth-weight infants.**

**de Jong M**, Lafeber HN, Cranendonk A, van Weissenbruch MM.

Horm Res Paediatr. 2014;81(1):43-9. doi: 10.1159/000355597. Epub 2013 Nov 20.

**BACKGROUND:** Term small-for-gestational-age and preterm born infants have an increased prevalence of metabolic syndrome components already in childhood. Data in very-low-birth-weight (VLBW) children are limited. We investigated the prevalence of metabolic syndrome components in VLBW infants at 2 years of corrected age.

**METHODS:** We included 38 children, participating in the Neonatal Insulin Replacement Therapy in Europe (NIRTURE) trial, a randomized controlled trial of early insulin therapy in VLBW infants. Metabolic syndrome components were defined as: body mass index SDS >2; blood pressure (systolic and/or diastolic) ≥ 90th percentile; triglycerides ≥ 0.98 mmol/l; high-density lipoprotein (HDL) cholesterol ≤ 1.03 mmol/l; glucose ≥ 5.6 mmol/l.

**RESULTS:** Two children (5%) had three metabolic syndrome components, 13 children (34%) had two components, and 11 children (29%) one component. 63% had raised blood pressure (prevalence higher in boys), 32% low HDL, and 30% high triglycerides (prevalence lower in early insulin group). In children with body mass index SDS <0, insulin-treated children had higher HDL than children with standard care. Systolic blood pressure was correlated with growth between term and 2 years of corrected age.

**CONCLUSION:** VLBW infants already have a high prevalence of metabolic syndrome components at 2 years of corrected age. Early insulin treatment could have long-term benefits for some of these components.

PMID: 24281139

### **Degree of methylation of ZAC1 (PLAGL1) is associated with prenatal and post-natal growth in healthy infants of the EDEN mother child cohort.**

Azzi S, **Sas TC**, Koudou Y, Le Bouc Y, Souberbielle JC, Dargent-Molina P, Netchine I, Charles MA. Epigenetics. 2014 Mar;9(3):338-45. doi: 10.4161/epi.27387. Epub 2013 Dec 6.

The ZAC1 gene, mapped to the 6q24 region, is part of a network of co-regulated imprinted genes involved in the control of embryonic growth. Loss of methylation at the ZAC1 differentially methylated region (DMR) is associated with transient neonatal diabetes mellitus, a developmental disorder involving growth retardation and diabetes in the first weeks of post-natal life. We assessed whether the degree of methylation of the ZAC1 DMR in leukocytes DNA extracted from cord blood is associated with fetal, birth and post-natal anthropometric measures or with C-peptide concentrations in cord serum. We also searched for an influence of dietary intake and maternal parameters on ZAC1 DMR methylation. We found positive correlations between the ZAC1 DMR methylation index (MI) and estimated fetal weight (EFW) at 32 weeks of gestation, weight at birth and weight at one year of age (respectively,  $r = 0.15, 0.09, 0.14$ ;  $P$  values = 0.01, 0.15, 0.03). However, there were no significant cor-

relations between the ZAC1 DMR MI and cord blood C-peptide levels. Maternal intakes of alcohol and of vitamins B2 were positively correlated with ZAC1 DMR methylation (respectively,  $r = 0.2$  and  $0.14$ ;  $P = 0.004$  and  $0.04$ ). The influence of ZAC1 seems to start in the second half of pregnancy and continue at least until the first year of life. The maternal environment also appears to contribute to the regulation of DNA methylation.

**KEYWORDS:** C-peptide; ZAC1/HYMAIimprinted locus; fetal development; imprinting disorders; insulin secretion in vivo; metabolism disorders; nutrition and epigenetic regulation; pathophysiology and metabolism; transient neonatal diabetes mellitus

PMID: 24316753

### **ECMO in neonates: neuroimaging findings and outcome.**

van Heijst AF, **de Mol AC**, IJsselstijn H.

Semin Perinatol. 2014 Mar;38(2):104-13. doi: 10.1053/j.semperi.2013.11.008.

Extracorporeal membrane oxygenation (ECMO) is a rescue therapy for newborns with severe but reversible respiratory failure. Although ECMO has significantly improved survival, it is associated with substantial complications, of which intracranial injuries are the most important. These injuries consist of hemorrhagic and non-hemorrhagic, ischemic lesions. Different from the classical presentation of hemorrhages in preterm infants, hemorrhages in ECMO-treated newborns are mainly parenchymal and with a high percentage in the posterior fossa area. There are conflicting data on the predominant occurrence of cerebral lesions in the right hemisphere. The existence of intracerebral injuries and the classification of its severity are the major predictors of neurodevelopmental outcome. This section will discuss the known data on intracranial injury in the ECMO population and the effect of ECMO on the brain.

PMID: 24580766

### **Karyotype-Specific Ear and Hearing Problems in Young Adults With Turner Syndrome and the Effect of Oxandrolone Treatment.**

Verver EJ, Freriks K, **Sas TC**, Huygen PL, Pennings RJ, Smeets DF, Hermus AR, Menke LA, Wit JM, Otten BJ, van Alfen-van der Velden JA, de Muinck Keizer-Schrama SM, Topsakal V, Admiraal RJ, Timmers HJ, Kunst HP.

Otol Neurotol. 2014 Oct;35(9):1577-84. doi: 10.1097/MAO.0000000000000406.

**OBJECTIVE:** To evaluate karyotype-specific ear and hearing problems in young-adult patients with Turner syndrome (TS) and assess the effects of previous treatment with oxandrolone (Ox).

**STUDY DESIGN:** Double-blind follow-up study.

**SETTING:** University hospital.

**PATIENTS:** Sixty-five TS patients (mean age, 24.3 yr) previously treated with growth hormone combined with placebo, Ox 0.03 mg/kg per day, or Ox 0.06 mg/kg per day from the age of 8 years and estrogen from the age of 12 years.

**INTERVENTION:** Ear examination was performed according to standard clinical practice.

Air- and bone conduction thresholds were measured in decibel hearing level.

**MAIN OUTCOME MEASURES:** We compared patients with total monosomy of the short arm of the X chromosome ( $X_p$ ), monosomy 45,X and isochromosome 46,X,i(Xq), with patients with a partial monosomy  $X_p$ , mosaicism or other structural X chromosomal anomalies. We assessed the effect of previous Ox treatment.

**RESULTS:** Sixty-six percent of the patients had a history of recurrent otitis media. We found hearing loss in 66% of the ears, including pure sensorineural hearing loss in 32%. Hearing thresholds in patients with a complete monosomy Xp were about 10 dB worse compared with those in patients with a partial monosomy Xp. Air- and bone conduction thresholds were not different between the placebo and Ox treatment groups.

**CONCLUSION:** Young-adult TS individuals frequently have structural ear pathology, and many suffer from hearing loss. This indicates that careful follow-up to detect ear and hearing problems is necessary, especially for those with a monosomy 45,X or isochromosome 46,X,i(Xq). Ox does not seem to have an effect on hearing.

PMID: 25133471

### Reference ranges for serum $\beta$ -trace protein in neonates and children younger than 1 year of age.

Zwiers AJ, Cransberg K, de Rijke YB, Willemsen SP, **de Mol AC**, Tibboel D, de Wildt SN. Clin Chem Lab Med. 2014 Dec;52(12):1815-21. doi: 10.1515/cclm-2014-0371.

**BACKGROUND:**  $\beta$ -Trace protein (BTP) has been proposed as an alternative endogenous marker of glomerular filtration rate. Data on BTP reference ranges in young children are scarce. We therefore aim to establish reference ranges and examine the developmental course of serum BTP in basically healthy children younger than 1 year of age.

**METHODS:** Single blood samples were taken from healthy children (born at gestational age  $\geq 37$  weeks) <12 months of age. Serum BTP was measured using the N latex B-trace protein assay (Siemens Diagnostics, Deerfield, IL, USA) on an Immage® 800 Rate Nephelometer (Beckman Coulter Inc. Brea, CA, USA). Serum creatinine and cystatin C were additionally determined and compared to reference values to confirm a normal renal function.

**RESULTS:** From June 2010 to January 2014, 95 blood samples were collected from 95 children {67.4% male; median age 120 days [inter quartile range 57-166]}. BTP was normally distributed (mean concentration  $0.84 \pm$  standard deviation 0.35 mg/L). Considering all children, the 50th centile BTP reference concentration was 0.82 mg/L (5th-95th centiles; 0.27-1.38).

BTP concentrations were the highest in neonates and steadily declined with increasing age (Spearman's rank correlation was -0.415,  $p=0.002$ ). No gender differences were found.

**CONCLUSION:** Our data provide a BTP reference range for the first year of life. Seeing the biological pattern of BTP, with only a limited postnatal decline, this marker might offer a promising alternative to serum creatinine-based METHODS for estimating glomerular filtration rate in newborns.

PMID: 24940717

### Safety and efficacy of oxandrolone in growth hormone-treated girls with Turner syndrome: evidence from recent studies and recommendations for use.

**Sas TC**, Gault EJ, Bardsley MZ, Menke LA, Freriks K, Perry RJ, Otten BJ, de Muinck Keizer-Schrama SM, Timmers H, Wit JM, Ross JL, Donaldson MD. Horm Res Paediatr. 2014;81(5):289-97.

There has been no consensus regarding the efficacy and safety of oxandrolone (Ox) in addition to growth hormone (GH) in girls with Turner syndrome (TS), the optimal age of starting this treatment, or the optimal dose. This collaborative venture between Dutch, UK and US centers is intended to give a summary of the data from three recently published randomized, place-

bo-controlled, double-blind studies on the effects of Ox. The published papers from these studies were reviewed within the group of authors to reach consensus about the recommendations. The addition of Ox to GH treatment leads to an increase in adult height, on average 2.3–4.6 cm. If Ox dosages < 0.06 mg/kg/day are used, side effects are modest. The most relevant safety concerns are virilization (including clitoromegaly and voice deepening) and a transient delay of breast development. We advise monitoring signs of virilization breast development and possibly blood lipids during Ox treatment, in addition to regular follow-up assessments for TS. In girls with TS who are severely short for age, in whom very short adult stature is anticipated, or in whom the growth rate is modest despite good compliance with GH, adjunctive treatment with Ox at a dosage of 0.03–0.05 mg/kg/day starting from the age of 8–10 years onward can be considered.

*PMID: 24776783*

## Relation of highly sensitive cardiac troponin T in hypertrophic cardiomyopathy to left ventricular mass and cardiovascular risk.

Cramer G, **Bakker J**, Gommans F, Brouwer M, **Kurvers M**, **Fouraux M**, Verheugt F, **Kofflard M**. Am J Cardiol. 2014 Apr 1;113(7):1240-5. doi: 10.1016/j.amjcard.2013.12.033. Epub 2014 Jan 16.

Elevated cardiac troponin can be seen in patients with left ventricular (LV) hypertrophy and in asymptomatic subjects with a high a priori risk of cardiovascular disease (CVD). In hypertrophic cardiomyopathy (HC) troponin can be detected as well, but little is known about the contribution of LV mass, on the one hand, and the long-term risk of CVD, on the other. In an observational single-center study of 62 patients with HC, without a history of CVD, we assessed the Framingham Heart 10-year risk score (FH10yrs), LV mass index (LVMI) using magnetic resonance imaging, and highly sensitive cardiac troponin T (hs-cTnT). Hs-cTnT (>3 ng/L) was detectable in 74% of patients (46 of 62). Hs-cTnT was elevated in 26% (16 of 62) of patients (ninety-ninth percentile reference limit of 14 ng/L or more). From 3 to 14 ng/L, patients were older, more often had hypertension, and the FH10yrs was higher. Hs-cTnT correlated positively with LVMI ( $p < 0.001$ ) and maximal wall thickness ( $p < 0.001$ ). In addition, LVMI and hypertension were independently associated with increasing hs-cTnT concentrations in linear regression. Using multivariate binary logistic regression, both LVMI and FH10yrs were independently associated with detectable hs-cTnT levels. In contrast, only LVMI was associated with elevated hs-cTnT levels. In conclusion, hs-cTnT was detectable in 3 quarters and elevated in a quarter of our patients with HC. Although detectable hs-cTnT is associated with both LV mass and CVD risk, elevated hs-cTnT relates to LV mass only. This indicates that hypertrophy more than the risk of CVD seems the most important drive for hs-cTnT to occur in these patients.

PMID: 24513467

## Magnetic Resonance Imaging in Patients with Unilateral Bloody Nipple Discharge; Useful When Conventional Diagnostics are Negative?

**van Gelder L, Bisschops RH, Menke-Pluymers MB, Westenend PJ, Plaisier PW.**

World J Surg. 2014 Aug 15. [Epub ahead of print]

**BACKGROUND:** Unilateral bloody nipple discharge (UBND) is mostly caused by benign conditions such as papilloma or ductal ectasia. However, in 7-33 % of all nipple discharge, it is caused by breast cancer. Conventional diagnostic imaging like mammography (MMG) and ultrasonography (US) is performed to exclude malignancy. Preliminary investigations of breast magnetic resonance imaging (MRI) assume that it has additional value. With an increasing availability of MRI, it is of clinical importance to evaluate this.

We evaluated the additional diagnostic value of MRI in patients with UBND in the absence of a palpable mass, with normal conventional imaging.

**METHODS:** All women with UBND in the period November 2007-July 2012 were included. In addition to the standard work-up (patient's history, physical examination, MMG, and US), MRI was performed. Data from these examinations and treatment were collected retrospectively.

**RESULTS:** A total of 111 women (mean age 52 years; range 23-80) were included. In nine (8 %) patients, malignancy was suspected on MRI while conventional imaging was normal. In eight (89 %) of these patients, histology was obtained, two by core biopsy and six by terminal duct excision. Benign conditions were found in six patients (86 %) and a (pre-) malignant lesion in two patients. In both cases, it concerned a ductal carcinoma in situ, which was treated with breast-conserving therapy. Moreover, in two cases of (pre)malignancy, the MRI was interpreted as negative.

**CONCLUSION:** In patients with UBND who show no signs of a malignancy on conventional diagnostic examinations, the added value of a breast MRI is limited, since a malignancy can be demonstrated in <2 %.

PMID: 25123174

### **Influence of C-reactive protein levels and age on the value of D-dimer in diagnosing pulmonary embolism.**

Crop MJ, Siemes C, Berendes P, van der Straaten F, Willemsen S, Levin MD.

Eur J Haematol. 2014 Feb;92(2):147-55. doi: 10.1111/ejh.12218. Epub 2013 Nov 22.

**BACKGROUND:** Recently, the number of performed CT-angiographies to diagnose pulmonary embolism (PE) rised markedly, while the incidence of PE hardly increased. This low yield of CT-angiography leads to more patients exposed to radiation and higher costs.

**AIM:** The diagnostic value of age, C-reactive protein (CRP) and D-dimer in PE was investigated. Additionally an age-adjusted D-dimer cutoff level [age-adjusted cutoff = age/100 mg/L] was compared with the conventional cutoff level in diagnosing PE for patients  $\geq 50$  yr.

**METHODS:** This observational study (2004-2007) included all consecutive patients suspected for PE presenting on the emergency department with a performed CT-angiography after measuring CRP and D-dimer levels.

**RESULTS:** Of 4609 patients suspected for PE, 1164 patients underwent CT-angiography of whom 309 (26.5%) had PE. Correlation between CRP and D-dimer was 0.42 ( $P < 0.001$ ).

D-dimer and age correlated positively ( $r_s = 0.33$ ,  $P < 0.001$ ), but only in patients  $> 50$  yr and independent of PE. Multivariate regression analysis showed significant contribution of age, D-dimer and age-adjusted D-dimer for diagnosing PE, but not for CRP. Using an age-adjusted D-dimer cutoff value increased specificity from 37% to 50%, whereas sensitivity declined from 96% to 90%. Applying this age-adjusted cutoff level in patients  $\geq 70$  yr, specificity increased from 18% to 40%, while sensitivity decreased from 96% to 88%.

**CONCLUSION:** In the prediction of PE, age and D-dimer levels are relevant, while CRP level is not. Using an age-adjusted D-dimer cutoff in older patients remarkably improves the specificity of D-dimer testing with a minor decline in sensitivity. This may increase the yield of CT-angiography in diagnosing PE.

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**KEYWORDS:** C-reactive protein; D-dimer; age-adjusted cutoff; pulmonary embolism; sensitivity; specificity

PMID: 24164492

**Extreme elevation of serum angiotensin-converting enzyme (ACE) activity: always consider familial ACE hyperactivity.**

**Stouten K, van de Werken M, Tchertverikov I, Saboerali M, Vermeer HJ, Castel R, Verheijen FM.**

Ann Clin Biochem. 2014 Mar;51(Pt 2):289-93. doi: 10.1177/0004563213489812.

Epub 2013 Jul 29.

Measurement of serum angiotensin-converting enzyme (ACE) activity can be helpful in the diagnosis and disease monitoring of sarcoidosis. Elevated serum ACE activity is found in 60-70% of sarcoidosis patients. Usually, the ACE activity is mildly increased (<3-fold the upper limit of the reference range) in sarcoidosis patients. Extremely elevated ACE activity is suggestive of the benign condition known as 'familial hyperactivity of ACE'. Familial hyperactivity of ACE is a relatively rare condition and can be confirmed by genetic testing. Considering a genetic cause of strongly elevated serum ACE activity is important to prevent possible overdiagnoses. Here, we highlight the factors that may complicate the interpretation of serum ACE activity measurements, and we present two cases that illustrate the importance of interdisciplinary consultation when extremely elevated serum ACE activity is measured.

**KEYWORDS:** Laboratory management; analytes; clinical studies; enzymes; genetics; laboratory methods

*PMID: 23897103*



## Coaching Reduced the Radiation Dose of Pain Physicians by Half during Interventional Procedures.

**Slegers AS, Gültuna I, Aukes JA, van Gorp EJ, Blommers FM, Niehof SP, Bosman J.**

Pain Pract. 2014 Oct 29. doi: 10.1111/papr.12251. [Epub ahead of print]

The increased use of C-arm fluoroscopy in interventional pain management has led to higher radiation exposure for pain physicians. This study investigated whether or not real-time radiation dose feedback with coaching can reduce the scatter dose received by pain physicians. Firstly, phantom measurements were made to create a scatter dose profile, which visualizes the average scatter radiation for different C-arm positions at 3 levels of height. Secondly, in the clinical part, the radiation dose received by pain physicians during pain treatment procedures was measured real-time to evaluate (1) the effect of real-time dose feedback on the received scatter dose, and (2) the effect of knowledge of the scatter dose profile and active coaching, on the scatter dose received by the pain physician. The clinical study included 330 interventional pain procedures. The results showed that real-time feedback of the received dose did not lead to a reduction in scatter radiation. However, visualization of the scatter dose in a scatter dose profile and active coaching on optimal positions did reduce the scatter radiation received by pain physicians during interventional pain procedures by 46.4% ( $P = 0.05$ ). Knowledge of and real-time coaching with the scatter dose profile reduced the dose of pain physicians by half, caused by their increased awareness for scatter radiation and their insight into strategic positioning.

PMID: 25354342

## Technical and radiological image quality comparison of different liquid crystal displays for radiology.

**Dams FE, Leung KY, van der Valk PH, Kock MC, Bosman J, Niehof SP.**

Med Devices (Auckl). 2014 Oct 31;7:371-7. doi: 10.2147/MDER.S67443. eCollection 2014.

**BACKGROUND:** To inform cost-effective decisions in purchasing new medical liquid crystal displays, we compared the image quality in displays made by three manufacturers.  
**METHODS:** We recruited 19 radiologists and residents to compare the image quality of four liquid crystal displays, including 3-megapixel Barco®, Eizo®, and NEC® displays and a 6-megapixel Barco display. The evaluators were blinded to the manufacturers' names. Technical assessments were based on acceptance criteria and test patterns proposed by the American Association of Physicists in Medicine. Radiological assessments were performed on images from the American Association of Physicists in Medicine Task Group 18. They included X-ray images of the thorax, knee, and breast, a computed tomographic image of the thorax, and a magnetic resonance image of the brain. Image quality was scored on an analog scale (range 0-10). Statistical analysis was performed with repeated-measures analysis of variance.  
**RESULTS:** The Barco 3-megapixel display passed all acceptance criteria. The Eizo and NEC displays passed the acceptance criteria, except for the darkest pixel value in the grayscale display function. The Barco 6-megapixel display failed criteria for the maximum luminance

response and the veiling glare. Mean radiological assessment scores were  $7.8 \pm 1.1$  (Barco 3-megapixel),  $7.8 \pm 1.2$  (Eizo),  $8.1 \pm 1.0$  (NEC), and  $8.1 \pm 1.0$  (Barco 6-megapixel). No significant differences were found between displays.

**CONCLUSION:** According to the tested criteria, all the displays had comparable image quality; however, there was a three-fold difference in price between the most and least expensive displays.

**KEYWORDS:** data display; humans; liquid crystals; radiographic image enhancement; user-computer interface

*PMID: 25382988*

## Feedback providers' credibility impacts students' satisfaction with feedback and delayed performance.

van de Ridder JM, Berk FC, Stokking KM, Ten Cate OT.

Med Teach. 2014 Oct 13:1-8. [Epub ahead of print]

**Abstract Purpose:** Medical students receive feedback during clerkships from many different sources: attendings, residents, paramedics, other clerks and even patients. Not all feedback providers have similar impact on learning. One characteristic that is believed to have impact is their credibility to the recipient. This study investigates the effects of feedback provider credibility on medical student satisfaction, self-efficacy and performance with a trained skill. **METHODS:** A single-blind randomized controlled between-subjects design was used, with feedback provider credibility (high-low) as independent variable and examination of hearing abilities as the task. First year medical students' (n = 68) satisfaction, self-efficacy and performance were the dependent variables and were measured both directly after the intervention and after a three-week delay. **RESULTS:** Credibility did not significantly affect immediate or delayed self-efficacy. Students receiving feedback from a high-credibility source were more satisfied with the feedback. They did not perform significantly better immediately after the feedback intervention, but did so three weeks after the intervention. High credibility was associated with a perception of a negative feedback message and an unsocial feedback provider. **CONCLUSIONS:** Feedback provider credibility impacts satisfaction with feedback and delayed performance. If feedback is not effective in clinical settings, feedback providers may reconsider their credibility.

PMID: 25306959

# Maag-, darm-, en levergeneeskunde

## Multiple elevated red spots in a woman with nausea, altered stools, and weight loss.

**Maas KS, van de Vrie W, Kuizinga MC.**

Clin Gastroenterol Hepatol. 2014 Jan;12(1):e1. doi: 10.1016/j.cgh.2013.05.022. Epub 2013 Jun 2.

PMID: 23735445

## Comparing quality, safety, and costs of colonoscopies performed by nurse vs physician trainees.

Massl R, van Putten PG, Steyerberg EW, van Tilburg AJ, Lai JY, de Ridder RJ, Brouwer JT, Verburg RJ, **Alderliesten J**, Schoon EJ, van Leerdam ME, Kuipers EJ

Clin Gastroenterol Hepatol. 2014 Mar;12(3):470-7. doi: 10.1016/j.cgh.2013.08.049. Epub 2013 Sep 10.

**BACKGROUND & AIMS:** We evaluated the quality and safety of colonoscopies performed by nurse and physician endoscopy trainees as well as the cost differences.

**METHODS:** We performed a study of 7 nurse and 8 physician (gastroenterology fellows) endoscopy trainees at 2 medical centers in the Netherlands from September 2008 through April 2012. At the beginning of the study, the subjects had no experience in endoscopy; they were trained in gastrointestinal endoscopy according to the regulations of the Dutch Society of Gastroenterology, performing a minimum of 100 colonoscopies. Each trainee then performed 135 consecutive colonoscopies (866 total by nurse trainees and 1080 by physician trainees) under supervision of a gastroenterologist; the colonoscopies were evaluated for quality and safety. We performed statistical analyses of data, assessing multilevel and cost minimization. The mean age of the patients was 57 years, and about half were women in each group.

**RESULTS:** The endoscopic quality and safety were comparable between nurse and physician trainees. Overall rates of cecal intubation were 95% for nurses and 93% for physicians ( $P = .38$ ), including procedures that required assistance from a supervisor; mean withdrawal times were 10.4 and 9.8 minutes, respectively ( $P = .44$ ). Each group detected 27% of adenomas and had a 0.5% rate of complication. In both groups, the rates of unassisted cecal intubation gradually increased with the number of colonoscopies performed, from 70% for nurses and 74% for physicians at the beginning to 89% and 86%, respectively, at the end of the assessment period. Using a strategy in which 1 gastroenterologist supervises 3 nurses, the personnel costs decreased from \$64.65 to \$54.58.

**CONCLUSION:** In a supervised setting, nurse endoscopists perform colonoscopies according to quality and safety standards that are comparable with those of physician endoscopist and can substantially reduce costs.

**KEYWORDS:** Colonoscopy Screening; Nurse Endoscopist; Quality Assessment

PMID: 24036056

### Surveillance in patients with long-segment Barrett's oesophagus: a cost-effectiveness analysis.

Kastelein F, van Olphen S, Steyerberg EW, Sikkema M, Spaander MC, Looman CW, Kuipers EJ, Siersema PD, Bruno MJ, de Bekker-Grob EW; on behalf of the ProBar-study group.

Collaborators (26): Biermann, Geldof H, van der Valk H, Ter Borg P, Giard R, Felt R, Meijer G, **Alderliesten J**, Heinhuis R, Ter Borg F, Arends J, Kolkman J, van Baarlen J, Tan T, den Hartog B, van Tilburg A, Engels L, Vos W, Peters F, Karrenbeld A, Schenk B, Moll F, Loffeld R, Flens M, van Roermund H, Lockefeer F.

Gut. 2014 Jul 18. pii: gutjnl-2014-307197. doi: 10.1136/gutjnl-2014-307197. [Epub ahead of print]

**OBJECTIVE:** Surveillance is recommended for Barrett's oesophagus (BO) to detect early oesophageal adenocarcinoma (OAC). The aim of this study was to evaluate the cost-effectiveness of surveillance.

**DESIGN:** We included 714 patients with long-segment BO in a multicentre prospective cohort study and used a multistate Markov model to calculate progression rates from no dysplasia (ND) to low-grade dysplasia (LGD), high-grade dysplasia (HGD) and OAC. Progression rates were incorporated in a decision-analytic model, including costs and quality of life data. We evaluated different surveillance intervals for ND and LGD, endoscopic mucosal resection (EMR), radiofrequency ablation (RFA) and oesophagectomy for HGD or early OAC and oesophagectomy for advanced OAC. The incremental cost-effectiveness ratio (ICER) was calculated in costs per quality-adjusted life-year (QALY).

**RESULTS:** The annual progression rate was 2% for ND to LGD, 4% for LGD to HGD or early OAC and 25% for HGD or early OAC to advanced OAC. Surveillance every 5 or 4 years with RFA for HGD or early OAC and oesophagectomy for advanced OAC had ICERs of €5.283 and €62.619 per QALY for ND. Surveillance every five to one year had ICERs of €4.922, €30.067, €32.531, €41.499 and €75.601 per QALY for LGD. EMR prior to RFA was slightly more expensive, but important for tumour staging.

**CONCLUSION:** Based on a Dutch healthcare perspective and assuming a willingness-to-pay threshold of €35.000 per QALY, surveillance with EMR and RFA for HGD or early OAC, and oesophagectomy for advanced OAC is cost-effective every 5 years for ND and every 3 years for LGD. Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to <http://group.bmj.com/group/rights-licensing/permissions>.

**KEYWORDS:** BARRETT'S CARCINOMA; BARRETT'S METAPLASIA; BARRETT'S OESOPHAGUS; COST-EFFECTIVENESS; OESOPHAGEAL CANCER

PMID: 25037191

# Medische microbiologie

## **An automated algorithm to preselect patients to be assessed individually in point prevalence surveys for hospital-acquired infections in surgery.**

**Streefkerk RH**, Moorman PW, Parlevliet GA, van der Hoeven C, Verbrugh HA, Vos MC, Verkooijen RP.

Infect Control Hosp Epidemiol. 2014 Jul;35(7):886-7. doi: 10.1086/676868. Epub 2014 May 29.

In this pilot study, we evaluate an algorithm that uses predictive clinical and laboratory parameters to differentiate between patients with hospital-acquired infection (HAI) and patients without HAI. Seventy-four percent of the studied population of surgical patients could be reliably (negative predictive value of 98%) excluded from detailed assessment by the infection control practitioner.

PMID: 24915221

## **Difficulties in diagnosing terminal ileitis due to *Yersinia pseudotuberculosis*.**

Wunderink HF, Oostvogel PM, **Frénay IH**, Notermans DW, Fruth A, Kuijper EJ

Eur J Clin Microbiol Infect Dis. 2014 Feb;33(2):197-200. doi: 10.1007/s10096-013-1943-4.

Epub 2013 Aug 8.

We report three patients with terminal ileitis and positive fecal cultures with *Yersinia pseudotuberculosis*. From one patient, a virulence plasmid (pYV)-negative *Y. pseudotuberculosis* was isolated, which represents the second finding of a pYV-negative isolate associated with human disease. All patients were treated with ciprofloxacin and fully recovered. Since conventional culture METHODS for yersiniosis are gradually replaced with molecular tests not recognizing *Y. pseudotuberculosis*, we recommend to include a specific culture medium or to apply a specific polymerase chain reaction (PCR) assay on fecal samples from patients suspected of terminal ileitis.

PMID: 23925588

## **Evaluation of an algorithm for electronic surveillance of hospital-acquired infections yielding serial weekly point prevalence scores.**

**Streefkerk RH**, Borsboom GJ, van der Hoeven CP, Vos MC, Verkooijen RP, Verbrugh HA.

Infect Control Hosp Epidemiol. 2014 Jul;35(7):888-90. doi: 10.1086/676869. Epub 2014 May 29.

Surveillance of hospital-acquired infections can be approximated by repeated surveys that are performed in a standardized, cost-effective manner. We developed an integrated software system for serial electronic hospital-wide point prevalence surveys using algorithms that proved highly sensitive and specific over a 5-year period in a large university medical center.

PMID: 24915222

### Evaluation of yield of currently available diagnostics by sample type to optimize detection of respiratory pathogens in patients with a community-acquired pneumonia.

Huijskens EG, Rossen JW, Kluytmans JA, van der Zanden AG, Koopmans M.

Influenza Other Respir Viruses. 2014 Mar;8(2):243-9. doi: 10.1111/irv.12153. Epub 2013 Aug 20.

**BACKGROUND:** For the detection of respiratory pathogens, the sampling strategy may influence the diagnostic yield. Ideally, samples from the lower respiratory tract are collected, but they are difficult to obtain.

**OBJECTIVES:** In this study, we compared the diagnostic yield in sputum and oropharyngeal samples (OPS) for the detection of respiratory pathogens in patients with community-acquired pneumonia (CAP), with the OBJECTIVE to optimize our diagnostic testing algorithm.

**METHODS:** Matched sputum samples, OPS, blood cultures, serum, and urine samples were taken from patients (>18 years) with CAP and tested for the presence of possible respiratory pathogens using bacterial cultures, PCR for 17 viruses and five bacteria and urinary antigen testing.

**RESULTS:** When using only conventional METHODS, that is, blood cultures, sputum culture, urinary antigen tests, a pathogen was detected in 49.6% of patients (n = 57). Adding molecular detection assays increased the yield to 80%. A pathogen was detected in 77 of the 115 patients in OPS or sputum samples by PCR. The sensitivity of the OPS was lower than that of the sputum samples (57% versus 74%). In particular, bacterial pathogens were more often detected in sputum samples. The sensitivity of OPS for the detection of most viruses was higher than in sputum samples (72% versus 66%), except for human rhinovirus and respiratory syncytial virus.

**CONCLUSION:** Addition of PCR on both OPS and sputum samples significantly increased the diagnostic yield. For molecular detection of bacterial pathogens, a sputum sample is imperative, but for detection of most viral pathogens, an OPS is sufficient.

**KEYWORDS:** Community-acquired pneumonia; oropharyngeal swabs; real-time PCR; respiratory virus; sputum samples; yield

PMID: 23957707

### Recommendations for the empirical treatment of complicated urinary tract infections using surveillance data on antimicrobial resistance in the Netherlands.

Koningstein M, van der Bij AK, de Kraker ME, Monen JC, Muilwijk J, de Greeff SC, Geerlings SE, van Hall MA; ISIS-AR Study Group.

Collaborators (51) Vlasplolder F, Cohen Stuart JW, van Hees BC, Wintermans RG, Altorf-van der Kuil W, Alblas J, van der Bij AK, Frenz D, Leenstra T, Monen JC, Muilwijk J, Notermans DW, de Greeff, van Keulen PH, Kluytmans JA, Mattsson EE, Sebens FW, **Frénay HM, Maraha B**, Heilmann FG, Halaby T, Versteeg D, Hendrix R, Schellekens JF, Diederens BM, de Brauwier EI, Stals FS, Bakker LJ, Dorigo-Zetsma JW, van Zeijl JH, Bernardis AT, de Jongh BM, Vlamincx BJ, Horrevorts A, Kuipers S, Wintermans RG, Moffie B, Brimicombe RW, Jansen CL, Renders NH, Hendrickx BG, Buiting AG, Kaan JA, Thijsen SF, Deege MP, Ekkelenkamp MB, Tjhie HT, van Zwet AA, Voorn GP, Ruijs GJ, Wolfhagen MJ.

PLoS One. 2014 Jan 28;9(1):e86634. doi: 10.1371/journal.pone.0086634. eCollection 2014.

**BACKGROUND:** Complicated urinary tract infections (c-UTIs) are among the most common nosocomial infections and a substantial part of the antimicrobial agents used in hospitals is for the treatment of c-UTIs. Data from surveillance can be used to guide the empirical treatment choices of clinicians when treating c-UTIs. We therefore used nation-wide surveillance data to evaluate antimicrobial coverage of agents for the treatment of c-UTI in the Netherlands.

**METHODS:** We included the first isolate per patient of urine samples of hospitalised patients collected by the Infectious Disease Surveillance Information System for Antibiotic Resistance (ISIS-AR) in 2012, and determined the probability of inadequate coverage for antimicrobial agents based on species distribution and susceptibility. Analyses were repeated for various patient groups and hospital settings.

**RESULTS:** The most prevalent bacteria in 27,922 isolates of 23,357 patients were *Escherichia coli* (47%), *Enterococcus* spp. (14%), *Proteus mirabilis* (8%), and *Klebsiella pneumoniae* (7%). For all species combined, the probability of inadequate coverage was <5% for amoxicillin or amoxicillin-clavulanic acid combined with gentamicin and the carbapenems. When including gram-negative bacteria only, the probability of inadequate coverage was 4.0%, 2.7%, 2.3% and 1.7%, respectively, for amoxicillin, amoxicillin-clavulanic acid, a second or a third generation cephalosporin in combination with gentamicin, and the carbapenems (0.4%). There were only small variations in RESULTS among different patient groups and hospital settings.

**CONCLUSION:** When excluding *Enterococcus* spp., considered as less virulent, and the carbapenems, considered as last-resort drugs, empirical treatment for c-UTI with the best chance of adequate coverage are one of the studied beta-lactam-gentamicin combinations. This study demonstrates the applicability of routine surveillance data for up-to-date clinical practice guidelines on empirical antimicrobial therapy, essential in patient care given the evolving bacterial susceptibility.

PMID: 24489755

### Selective decontamination of the oropharynx and the digestive tract, and antimicrobial resistance: a 4 year ecological study in 38 intensive care units in the Netherlands.

Houben AJ, Oostdijk EA, van der Voort PH, Monen JC, Bonten MJ, van der Bij AK; ISIS-AR Study Group.

Collaborators (52)

Vlaspolder F, Cohen Stuart JW, van Hees BC, Vijfhuizen J, Wintermans RG, Altorf-van der Kuil W, Alblas J, van der Bij AK, Frensz D, Leenstra T, Monen JC, Muilwijk J, Notermans DW, de Greeff SC, van Keulen PH, Kluytmans JA, Mattsson EE, Sebens FW, **Frénay HM, Maraha B**, Heilmann FG, Halaby T, Versteeg D, Hendrix R, Schellekens JF, Diederens BM, de Brauwier EI, Stals FS, Bakker LJ, Dorigo-Zetsma JW, van Zeijl JH, Bernardis AT, de Jongh BM, Vlaminckx BJ, Horrevorts A, Kuipers S, Wintermans RG, Mofie B, Brimicombe RW, Jansen CL, Renders NH, Hendrickx BG, Buiting AG, Kaan JA, Thijsen SF, Deege MP, Ekkelenkamp MB, Tjhe HT, van Zwet AA, Voorn GP, Ruijs GJ, Wolfhagen MJ

J Antimicrob Chemother. 2014 Mar;69(3):797-804. doi: 10.1093/jac/dkt416. Epub 2013 Oct 21.

Comment in

Comment on: Selective decontamination of the oropharynx and the digestive tract, and antimicrobial resistance: a 4 year ecological study in 38 intensive care units in the Netherlands. [J Antimicrob Chemother. 2014]



Selective decontamination of the oropharynx and the digestive tract, and antimicrobial resistance: a 4 year ecological study in 38 intensive care units in the Netherlands--authors' response. [J Antimicrob Chemother. 2014]

**OBJECTIVE:** Selective oropharyngeal decontamination (SOD) and selective decontamination of the digestive tract (SDD) are associated with improved outcomes among patients in intensive care units (ICUs), but uncertainty remains about their long-term effects on resistance levels. We determined trends in antibiotic resistance among Gram-negative bacteria in 38 Dutch ICUs using and not using SOD/SDD.

**METHODS:** The Infectious Disease Surveillance Information System-Antibiotic Resistance (ISIS-AR) was used to identify all Enterobacteriaceae, *Pseudomonas aeruginosa* and *Acinetobacter* spp. isolates from blood and respiratory tract specimens from ICUs between January 2008 and April 2012. Per patient, the last isolate per species per specimen per month was selected to determine cumulative resistance rates (per 100 beds/month) for colistin, tobramycin, ciprofloxacin, ceftazidime and cefotaxime/ceftriaxone in ICUs that continuously used or did not use SOD/SDD, and ICUs that introduced SOD/SDD. Time trends were analysed by multilevel Poisson regression.

**RESULTS:** Seventeen ICUs continuously used SOD/SDD (859 months), 13 did not use SOD/SDD (663 months) and 8 introduced SOD/SDD (223 and 117 months before and after introduction). There were no discernible trends in antibiotic resistance among 637 blood isolates. For the 8353 respiratory isolates, resistance to cefotaxime/ceftriaxone increased in ICUs that did not use SOD/SDD ( $P < 0.001$ ) and decreased in those that continuously used SOD/SDD ( $P = 0.04$ ), as did resistance to ciprofloxacin ( $P < 0.001$ ). The introduction of SOD/SDD was followed by statistically significant reductions in resistance rates for all antimicrobial agents.

**CONCLUSION:** Continuous use of SOD/SDD was associated with decreasing trends for resistance to cefotaxime/ceftriaxone and ciprofloxacin. The introduction of SOD/SDD was associated with reductions in resistance rates for all antimicrobial agents included.

**KEYWORDS:** bacterial drug resistance; selective decontamination of the digestive tract; selective oropharyngeal decontamination; surveillance

PMID: 24144922

### **The value of signs and symptoms in differentiating between bacterial, viral and mixed aetiology in patients with community-acquired pneumonia.**

Huijskens EG, Koopmans M, Palmes FM, van Erkel AJ, Mulder PG, Rossen JW.

J Med Microbiol. 2014 Mar;63(Pt 3):441-52. doi: 10.1099/jmm.0.067108-0. Epub 2013 Dec 16.

Current diagnostics for community-acquired pneumonia (CAP) include testing for a wide range of pathogens, which is costly and not always informative. We compared clinical and laboratory parameters of patients with CAP caused by different groups of pathogens to evaluate the potential for targeted diagnostics and directed treatment. In a prospective study, conducted between April 2008 and April 2009, adult patients with CAP were tested for the presence of a broad range of possible respiratory pathogens using bacterial cultures, PCR, urinary antigen testing and serology. Of 408 patients with CAP, pathogens were detected in 263 patients (64.5%). *Streptococcus pneumoniae* and influenza A virus were the most frequently identified bacterial and viral pathogens, respectively. Age had a significant effect on the prediction of aetiology ( $P = 0.054$ ), with an increase in the relative contribution of viruses with advancing age. Multivariate analyses further showed that the presence of cough increased the likelihood of detecting a viral pathogen [odds ratio (OR) 5.536, 95% confidence interval (CI) 2.130-14.390],

the presence of immunodeficiency decreased the likelihood of detecting a bacterial pathogen (OR 0.595, 95 % CI 0.246-1.437) and an increase in pneumonia severity index score increased the likelihood of detecting a pathogen in general. Although several variables were independently associated with the detection of a pathogen group, substantial overlap meant there were no reliable clinical predictors to distinguish aetiologies. Therefore, testing for common respiratory pathogens is still necessary to optimize treatment.

PMID: 24344207

### **Evaluation of *Borrelia* real time PCR DNA targeting *OspA*, *FlaB* and 5S-23S IGS and *Borrelia* 16S rRNA RT-qPCR.**

**de Leeuw BH, Maraha B, Hollemans L, Sprong H, Brandenburg AH, Westenend PJ, Kusters JG.**

J Microbiol Methods. 2014 Dec;107:41-6. doi: 10.1016/j.mimet.2014.09.001.  
Epub 2014 Sep 16.

*Borrelia burgdorferi* non-sensu lato (s.l.) strains occurred in the Netherlands. A multiplex *OspA*, *FlaB*, IGS real time PCR was compared to 16S rRNA/rDNA RT-qPCR with lower average Cycle threshold (Ct) and LOD on strain dilutions. Multiplexing increased sensitivity on CSF samples (n=74), distinguishing *B. burgdorferi* s.l. from non-s.l. strains.

KEYWORDS: *Borrelia*; Lyme; Real time PCR

PMID: 25218111

## **Update on the Preventive Antibiotics in Stroke Study (PASS): a randomised controlled phase 3 clinical trial.**

Westendorp WF, Vermeij JD, van Geloven N, Dippel DW, Dijkgraaf MG, van der Poll T, Prins JM, Spanjaard L, Vermeij FH, Nederkoorn PJ1, van de Beek D. *Trials*. 2014 Apr 21;15:133. doi: 10.1186/1745-6215-15-133.

Stroke is a leading cause of death worldwide. Infections after stroke occur in 30% of stroke patients and are strongly associated with unfavourable outcome. Preventive antibiotic therapy lowers infection rate in patients after stroke, however, the effect of preventive antibiotic treatment on functional outcome after stroke has not yet been investigated. The Preventive Antibiotics in Stroke Study (PASS) is an ongoing, multicentre, prospective, randomised, open-label, blinded end point trial of preventive antibiotic therapy in acute stroke. Patients are randomly assigned to either ceftriaxone at a dose of 2 g, given every 24 hours intravenously for four-days, in addition to stroke-unit care, or standard stroke-unit care without preventive antibiotic therapy. Aim of the study is to assess whether preventive antibiotic treatment improves functional outcome at three months by preventing infections.

PMID: 24750904

## **The effect of a slower than standard dose escalation scheme for dipyridamole on headaches in secondary prevention therapy of strokes: a randomized, open-label trial (DOSE).**

**de Vos-Koppelaar NC1, Kerkhoff H, de Vogel EM, Zock E, Dieleman HG.**

*Cerebrovasc Dis*. 2014;37(4):285-9. doi: 10.1159/000360751. Epub 2014 May 7.

**BACKGROUND:** Combination therapy with acetylsalicylic acid and dipyridamole is first-line treatment in secondary prevention of strokes. Approximately 40% of patients report headache as a side effect of dipyridamole. Dose escalation of dipyridamole reduces this side effect. In practice, different dose escalation schemes are used. In theory, slower dose escalation than a standard scheme reduces headaches even more. This study aimed to find the best dose escalation scheme for prevention of headaches as a side effect of dipyridamole in the secondary prevention of strokes.

**METHODS:** In this randomized, open-label, 4-week trial, 114 patients who had an ischemic stroke or transient ischemic attack were randomized to receive either a standard or slow dose escalation scheme of dipyridamole. Participants were asked to report the four most common side effects of dipyridamole in a study diary on study days 1, 3, 5, 7, 14, 21 and 28. They were asked to score headache intensity on a visual analog scale (VAS). Participants were unaware that the trial was focused on headaches. Primary end point was to determine if a slow dose escalation scheme reduces the percentage of patients with headaches. Secondary OBJECTIVE was to determine the number of patients who discontinued treatment with dipyridamole because of headaches.

**RESULTS:** Overall 37 patients (38%) of the final population reported headache, 19 (39%) in the standard dose escalation group and 18 (37%) in the slow dose escalation group ( $p = 1.0$ ). In

the standard dose escalation group patients scored headaches (VAS >4) on an average of 3.3 days and patients in the slow dose escalation group on 3.6 days ( $p = 0.82$ ). Mean VAS scores on study days 1, 3, 5, 7, 14 and 21 ranged from 1.4 to 3.7 in both groups. These scores did not differ significantly. However, on day 28 patients scored a significantly lower mean VAS score in the standard dose escalation group than in the slow dose escalation group (2.5 vs. 4.8;  $p = 0.05$ ). In the standard dose escalation group 6 patients (11%) discontinued treatment because of side effects of dipyridamole and 3 patients (6%) in the slow dose escalation group ( $p = 0.49$ , Fisher's exact test).

**CONCLUSION:** We showed that slower than standard dose escalation of dipyridamole in combination therapy with acetylsalicylic acid does not reduce headaches as a side effect. The use of such schemes should be discontinued in clinical practice. Slow dose escalation might, however, reduce the number of patients who discontinue treatment, but further research is needed to confirm this.

*PMID: 24819911*

## Clinical presentation and morbidity of contact lens-associated microbial keratitis: a retrospective study.

Hoddenbach JG, **Boekhoorn SS**, Wubbels R, Vreugdenhil W, Van Rooij J, Geerards AJ. Graefes Arch Clin Exp Ophthalmol. 2014 Feb;252(2):299-306. doi: 10.1007/s00417-013-2514-1. Epub 2013 Nov 27.

**PURPOSE:** To investigate the clinical presentation, isolated organism, treatment, and morbidity of contact lens-associated microbial keratitis needing hospitalization.

**METHODS:** This retrospective study included all consecutive patients with contact lens-associated microbial keratitis hospitalized in the Rotterdam Eye Hospital from January 1, 2005, to December 31, 2009. All data regarding epidemiological characteristics, clinical presentation, isolated organism, and treatment were collected from medical records.

**RESULTS:** There were 109 cases (108 patients) of contact lens-associated microbial keratitis hospitalized during the study period. Mean age was  $33.3 \pm 15.4$  (SD) years. *Pseudomonas aeruginosa* was the most frequently isolated microorganism (68.8 %), with minor resistance to gentamicin (2.7 %) and ofloxacin (1.3 %). At time of presentation, best corrected visual acuity (BCVA) was very poor, with the largest proportion of patients (65.1 %) seeing worse than 0.05 Snellen. After intensive treatment, the visual outcome improved considerably, with the largest proportion (67.0 %) achieving a BCVA  $\geq 0.7$  Snellen. Low BCVA at admission was significantly associated with a worse final BCVA. A total of 22 patients (20.2 %) required corneal transplantation (three emergency cases). Larger size of stromal infiltrate was significantly associated with the need for corneal transplantation.

**CONCLUSION:** Microbial keratitis is a serious complication of contact lens wear, with approximately one out of five hospitalized cases requiring corneal transplantation. Ofloxacin, or a combination of gentamicin and cephazolin, still appear to be excellent first-choice therapies in the Netherlands, as little resistance has developed to these antibiotics.

PMID: 24281783

# Pathologie

## **Magnetic Resonance Imaging in Patients with Unilateral Bloody Nipple Discharge; Useful When Conventional Diagnostics are Negative?**

**van Gelder L, Bisschops RH, Menke-Pluymers MB, Westenend PJ, Plaisier PW.**

World J Surg. 2014 Aug 15. [Epub ahead of print]

**BACKGROUND:** Unilateral bloody nipple discharge (UBND) is mostly caused by benign conditions such as papilloma or ductal ectasia. However, in 7-33 % of all nipple discharge, it is caused by breast cancer. Conventional diagnostic imaging like mammography (MMG) and ultrasonography (US) is performed to exclude malignancy. Preliminary investigations of breast magnetic resonance imaging (MRI) assume that it has additional value. With an increasing availability of MRI, it is of clinical importance to evaluate this. We evaluated the additional diagnostic value of MRI in patients with UBND in the absence of a palpable mass, with normal conventional imaging.

**METHODS:** All women with UBND in the period November 2007-July 2012 were included. In addition to the standard work-up (patient's history, physical examination, MMG, and US), MRI was performed. Data from these examinations and treatment were collected retrospectively.

**RESULTS:** A total of 111 women (mean age 52 years; range 23-80) were included. In nine (8 %) patients, malignancy was suspected on MRI while conventional imaging was normal. In eight (89 %) of these patients, histology was obtained, two by core biopsy and six by terminal duct excision. Benign conditions were found in six patients (86 %) and a (pre-) malignant lesion in two patients. In both cases, it concerned a ductal carcinoma in situ, which was treated with breast-conserving therapy. Moreover, in two cases of (pre)malignancy, the MRI was interpreted as negative.

**CONCLUSION:** In patients with UBND who show no signs of a malignancy on conventional diagnostic examinations, the added value of a breast MRI is limited, since a malignancy can be demonstrated in <2 %.

*PMID: 25123174*

## **Prophylactic nipple-sparing mastectomy leaves more terminal duct lobular units in situ as compared with skin-sparing mastectomy.**

**van Verschuer VM1, van Deurzen CH, Westenend PJ, Rothbarth J, Verhoef C, Luiten EJ, Menke-Pluymers MB, Koppert LB.**

Am J Surg Pathol. 2014 May;38(5):706-12. doi: 10.1097/PAS.0000000000000180.

Prophylactic skin-sparing mastectomy (SSM) is associated with major breast cancer risk reduction in high-risk patients. In prophylactic nipple-sparing mastectomy (NSM) it is unknown how many terminal duct lobular units (TDLUs) remain behind the nipple-areola complex (NAC) additionally to those behind the skin flap. Therefore, safety of NSM can be doubted. We compared amounts of TDLUs behind the NAC as compared with the skin. In prophylactic SSM and conventional therapeutic mastectomy patients, the NAC and an adjacent skin island (SI) were resected as if it were an NSM. NAC and SI were serially sectioned perpendicularly to the skin and analyzed for the amount of TDLUs present. Slides of NAC and SI were scanned, and slide

surface areas (cm) were measured. TDLUs/cm in NAC versus SI specimen, representing TDLU density, were analyzed pairwise. In total, 105 NACs and SIs of 90 women were analyzed. Sixty-four NACs (61%) versus 25 SIs (24%) contained  $\geq 1$  TDLUs. Median TDLU density was higher in NAC specimens (0.2 TDLUs/cm) as compared with SI specimens (0.0 TDLUs/cm;  $P < 0.01$ ). Independent risk factors for the presence of TDLUs in the NAC specimen were younger age and parity (vs. nulliparity). The finding of higher TDLU density behind the NAC as compared with the skin flap suggests that sparing the NAC in prophylactic NSM in high-risk patients possibly may increase postoperative breast cancer risk as compared with prophylactic SSM. Studies with long-term follow-up after NSM are warranted to estimate the level of residual risk.

PMID: 24698963

### Multiple elevated red spots in a woman with nausea, altered stools, and weight loss.

**Maas KS, van de Vrie W, Kuizinga MC.**

Clin Gastroenterol Hepatol. 2014 Jan;12(1):e1. doi: 10.1016/j.cgh.2013.05.022. Epub 2013 Jun 2.

PMID: 23735445

### Evaluation of *Borrelia* real time PCR DNA targeting *OspA*, *FlaB* and *5S-23S IGS* and *Borrelia* *16S rRNA RT-qPCR*.

**de Leeuw BH, Maraha B, Hollemans L, Sprong H, Brandenburg AH, Westenend PJ, Kusters JG.**

J Microbiol Methods. 2014 Dec;107:41-6. doi: 10.1016/j.mimet.2014.09.001. Epub 2014 Sep 16.

*Borrelia burgdorferi* non-sensu lato (s.l.) strains occurred in the Netherlands. A multiplex *OspA*, *FlaB*, *IGS* real time PCR was compared to *16S rRNA/rDNA RT-qPCR* with lower average Cycle threshold (Ct) and LOD on strain dilutions. Multiplexing increased sensitivity on CSF samples (n=74), distinguishing *B. burgdorferi* s.l. from non-s.l. strains.

KEYWORDS: *Borrelia*; Lyme; Real time PCR

PMID: 25218111

### Genetics of hereditary head and neck paragangliomas.

Boedeker CC, Hensen EF, Neumann HP, Maier W, **van Nederveen FH**, Suárez C, Kunst HP, Rodrigo JP, Takes RP, Pellitteri PK, Rinaldo A, Ferlito A.

Head Neck. 2014 Jun;36(6):907-16. doi: 10.1002/hed.23436. Epub 2013 Nov 30.

BACKGROUND: The purpose of this study was to give an overview on hereditary syndromes associated with head and neck paragangliomas (HNPGs).

METHODS: Our methods were the review and discussion of the pertinent literature.

RESULTS: About one third of all patients with HNPGs are carriers of germline mutations. Hereditary HNPGs have been described in association with mutations of 10 different genes. Mutations of the genes succinate dehydrogenase subunit D (SDHD), succinate dehydrogenase complex assembly factor 2 gene (SDHAF2), succinate dehydrogenase subunit C (SDHC), and succinate dehydrogenase subunit B (SDHB) are the cause of paraganglioma syndromes (PGLs) 1, 2, 3, and 4. Succinate dehydrogenase subunit A (SDHA), von Hippel-Lindau (VHL), and transmembrane

protein 127 (TMEM127) gene mutations also harbor the risk for HNPG development. HNPGs in patients with rearranged during transfection (RET), neurofibromatosis type 1 (NF1), and MYC-associated factor X (MAX) gene mutations have been described very infrequently. CONCLUSION: All patients with HNPGs should be offered a molecular genetic screening. This screening may usually be restricted to mutations of the genes SDHD, SDHB, and SDHC. Certain clinical parameters can help to set up the order in which those genes should be tested. © 2013 Wiley Periodicals, Inc.

KEYWORDS: head and neck paraganglioma; hereditary cancer; paraganglioma syndrome; pheochromocytoma; rare diseases

PMID: 23913591

### High prevalence of oncogenic MYD88 and CD79B mutations in primary testicular diffuse large B-cell lymphoma.

Kraan W, van Keimpema M, Horlings HM, Schilder-Tol EJ, Oud ME, **Noorduyn LA**, Kluin PM, Kersten MJ, Spaargaren M, Pals ST. Leukemia. 2014 Mar;28(3):719-20. doi: 10.1038/leu.2013.348. Epub 2013 Nov 20.

PMID: 24253023

### Limited diagnostic value of microsatellite instability associated pathology features in colorectal cancer.

van Putten PG, van Lier MG, Hage M, Biermann K, van Rijssel RH, **Westenend PJ**, Morreau H, Steyerberg EW, Dinjens WN, Kuipers EJ, van Leerdam ME, van Krieken JH. Fam Cancer. 2014 Sep;13(3):351-9. doi: 10.1007/s10689-014-9705-8.

To determine the diagnostic test characteristics and inter-observer variation of pathology features for identifying high microsatellite instability (MSI-H) colorectal cancer (CRC). Six pathologists blindly evaluated 177 CRC for the presence of MSI-H associated pathology features. Inter-observer agreement was determined by using Kappa-statistics. In the first random 88/177 cases, mucinous carcinoma, tumor-infiltrating lymphocytes (TIL) and Crohns-like infiltrate (CLI) were the best discriminators between MSI-H and microsatellite stable CRC [OR 5.6 (95 % CI 1.7-19), 5.4 (1.8-17) and 3.5 (1.1-11), respectively], with high specificity (89-91 %). The sensitivities for MSI-H, however, were low (31-41 %). In addition, inter-observer agreement was moderate for TIL and CLI ( $\kappa$  0.38 and 0.48, respectively), but very good for mucinous carcinoma ( $\kappa$  0.86). Interpretation of overall histopathology as suggestive for MSI-H performed better than any individual feature; OR 15 (5.2-44), and area under the curve 0.79. However, inter-observer agreement was moderate ( $\kappa$  0.53). In the second set, TIL and CLI were scored according to updated scoring systems. Although both remained the best individual discriminators, test characteristics and inter-observer agreement did not improve. MSI-H pathology features have moderate accuracy for identifying MSI-H CRC, and are identified with moderate inter-observer agreement. These findings highlight the limitations of clinical strategies, such as the revised Bethesda guidelines, which incorporate the MSI-H associated pathology features in their strategy to identify persons with lynch syndrome.

PMID: 24638969



### **Non-pheochromocytoma (PCC)/paraganglioma (PGL) tumors in patients with succinate dehydrogenase-related PCC-PGL syndromes: a clinicopathological and molecular analysis.**

Papathomas TG, Gaal J, Corssmit EP, Oudijk L, Korpershoek E, Heimdal K, Bayley JP, Morreau H, van Dooren M, Papaspyrou K, Schreiner T, Hansen T, Andresen PA, Restuccia DF, van Kessel I, van Leenders GJ, Kros JM, Looijenga LH, Hofland LJ, Mann W, **van Nederveen FH**, Mete O, Asa SL, de Krijger RR, Dinjens WN.  
Eur J Endocrinol. 2013 Nov 22;170(1):1-12. doi: 10.1530/EJE-13-0623. Print 2014 Jan.

**OBJECTIVE:** Although the succinate dehydrogenase (SDH)-related tumor spectrum has been recently expanded, there are only rare reports of non-pheochromocytoma/paraganglioma tumors in SDHx-mutated patients. Therefore, questions still remain unresolved concerning the aforementioned tumors with regard to their pathogenesis, clinicopathological phenotype, and even causal relatedness to SDHx mutations. Absence of SDHB expression in tumors derived from tissues susceptible to SDH deficiency is not fully elucidated.

**DESIGN AND METHODS:** Three unrelated SDHD patients, two with pituitary adenoma (PA) and one with papillary thyroid carcinoma (PTC), and three SDHB patients affected by renal cell carcinomas (RCCs) were identified from four European centers. SDHA/SDHB immunohistochemistry (IHC), SDHx mutation analysis, and loss of heterozygosity analysis of the involved SDHx gene were performed on all tumors. A cohort of 348 tumors of unknown SDHx mutational status, including renal tumors, PTCs, PAs, neuroblastic tumors, seminomas, and adenomatoid tumors, was investigated by SDHB IHC.

**RESULTS:** Of the six index patients, all RCCs and one PA displayed SDHB immunonegativity in contrast to the other PA and PTC. All immunonegative tumors demonstrated loss of the WT allele, indicating bi-allelic inactivation of the germline mutated gene. Of 348 tumors, one clear cell RCC exhibited partial loss of SDHB expression.

**CONCLUSION:** These findings strengthen the etiological association of SDHx genes with pituitary neoplasia and provide evidence against a link between PTC and SDHx mutations. Somatic deletions seem to constitute the second hit in SDHB-related renal neoplasia, while SDHx alterations do not appear to be primary drivers in sporadic tumorigenesis from tissues affected by SDH deficiency.

PMID: 24096523

### **Radiological analysis of hand and foot injuries after small aircraft crashes.**

Kubat B, Korthout T, **van Ingen G**, Rietveld LA, de Bakker HM.  
Forensic Sci Med Pathol. 2014 Sep;10(3):351-6. doi: 10.1007/s12024-014-9579-y.  
Epub 2014 Jul 2.

Medico-legal investigation of fatal aviation accidents should contribute to the reconstruction of the accident in addition to providing the usual information about cause and manner of death. In cases with more than one fatality, the question of who was flying the plane at the time of the crash may need to be answered. In such cases the identification of "control injuries" plays an important role. This study aims to investigate whether specific patterns of skeletal hand and foot injuries could assist in the identification of the pilot. The analysis of radiological investigations of hands and feet of 27 fatalities from 18 accidents showed that foot injuries are more frequent than hand injuries in pilots and passengers, dislocations of feet were more frequent in passengers, and right-sided injuries were more frequent in pilots. Injuries of the distal parts of the hand were slightly more frequent in the pilot group. The limited numbers

in the study do not allow definitive CONCLUSIONS and further investigations are needed. However, the study yields interesting RESULTS and shows that radiological examination should be included in the medico-legal air crash investigation.

PMID: 24985317

### Upregulation of Claudin-4, CAIX and GLUT-1 in distant breast cancer metastases.

Jiwa LS, van Diest PJ, Hoefnagel LD, Wesseling J, Wesseling P; Dutch Distant Breast Cancer Metastases Consortium, Moelans CB.

Collaborators; van de Vijver MJ, van Slooten HJ, **Westenend PJ**, Bart J, Seldenrijk CA, Nagtegaal ID, Oudejans J, **van der Valk P**, van der Groep P, de Vries EG, van der Wall E. BMC Cancer. 2014 Nov 22;14:864. doi: 10.1186/1471-2407-14-864.

**BACKGROUND:** Several studies have shown that the immunophenotype of distant breast cancer metastases may differ significantly from that of the primary tumor, especially with regard to differences in the level of hormone receptor protein expression, a process known as receptor conversion. This study aimed to compare expression levels of several membrane proteins between primary breast tumors and their corresponding distant metastases in view of their potential applicability for molecular imaging and drug targeting.

**METHODS:** Expression of Claudin-4, EGFR, CAIX, GLUT-1 and IGF1R was assessed by immunohistochemistry on tissue microarrays composed of 97 paired primary breast tumors and their distant (non-bone) metastases.

**RESULTS:** In both the primary cancers and the metastases, Claudin-4 was most frequently expressed, followed by GLUT-1, CAIX and EGFR. From primary breast cancers to their distant metastases there was positive to negative conversion, e.g. protein expression in the primary tumor with no expression in its paired metastasis, in 6%, 19%, 12%, 38%, and 0% for Claudin-4 (n.s), GLUT-1 (n.s), CAIX (n.s), EGFR (n.s) and IGF1R (n.s) respectively. Negative to positive conversion was seen in 65%, 47%, 43%, 9% and 0% of cases for Claudin-4 ( $p = 0.049$ ), GLUT-1 ( $p = 0.024$ ), CAIX ( $p = 0.002$ ), EGFR (n.s.) and IGF1R (n.s.) respectively. Negative to positive conversion of Claudin-4 in the metastasis was significantly associated with tumor size ( $p = 0.015$ ), negative to positive conversion of EGFR with negative PR status ( $p = 0.046$ ) and high MAI ( $p = 0.047$ ) and GLUT-1 negative to positive conversion with (neo) adjuvant chemotherapy ( $p = 0.039$ ) and time to metastasis formation ( $p = 0.034$ ). CAIX and GLUT-1 expression in the primary tumor were significantly associated with high MAI ( $p = 0.008$  and  $p = 0.038$  respectively).

**CONCLUSION:** Claudin-4 is frequently expressed in primary breast cancers but especially in their metastases and is thereby an attractive membrane bound molecular imaging and drug target. Conversion in expression of the studied proteins from the primary tumor to metastases was fairly frequent, except for IGF1R, implying that the expression status of metastases cannot always be reliably predicted from the primary tumor, thereby necessitating biopsy for reliable assessment.

PMID: 25417118

## **Coaching Reduced the Radiation Dose of Pain Physicians by Half during Interventional Procedures.**

**Slegers AS, Gültuna I, Aukes JA, van Gorp EJ, Blommers FM, Niehof SP, Bosman J.**

Pain Pract. 2014 Oct 29. doi: 10.1111/papr.12251. [Epub ahead of print]

The increased use of C-arm fluoroscopy in interventional pain management has led to higher radiation exposure for pain physicians. This study investigated whether or not real-time radiation dose feedback with coaching can reduce the scatter dose received by pain physicians. Firstly, phantom measurements were made to create a scatter dose profile, which visualizes the average scatter radiation for different C-arm positions at 3 levels of height. Secondly, in the clinical part, the radiation dose received by pain physicians during pain treatment procedures was measured real-time to evaluate (1) the effect of real-time dose feedback on the received scatter dose, and (2) the effect of knowledge of the scatter dose profile and active coaching, on the scatter dose received by the pain physician. The clinical study included 330 interventional pain procedures. The RESULTS showed that real-time feedback of the received dose did not lead to a reduction in scatter radiation. However, visualization of the scatter dose in a scatter dose profile and active coaching on optimal positions did reduce the scatter radiation received by pain physicians during interventional pain procedures by 46.4% ( $P = 0.05$ ). Knowledge of and real-time coaching with the scatter dose profile reduced the dose of pain physicians by half, caused by their increased awareness for scatter radiation and their insight into strategic positioning.

PMID: 25354342

## **Cardiac metastasis of malignant melanoma: a case report.**

**Aerts BR, Kock MC, Kofflard MJ, Plaisier PW.**

Neth Heart J. 2014 Jan;22(1):39-41. doi: 10.1007/s12471-013-0441-8.

The heart is regularly involved in metastatic neoplasms with cardiac metastases being found in up to 20 % of autopsies. We present a case about a 42-year-old Caucasian female with a fatal metastatic melanoma to the heart. The five-year survival rate for stage IV melanoma (melanoma with metastases to other organs) is 15 to 20 %. If patients with malignant melanoma present with new onset of cardiac symptoms, clinicians should always be aware of the possibility of cardiac metastases and perform further investigations.

PMID: 23821495

## **Relation of highly sensitive cardiac troponin T in hypertrophic cardiomyopathy to left ventricular mass and cardiovascular risk.**

**Cramer G, Bakker J, Gommans F, Brouwer M, Kurvers M, Fouraux M, Verheugt F, Kofflard M.**

Am J Cardiol. 2014 Apr 1;113(7):1240-5. doi: 10.1016/j.amjcard.2013.12.033. Epub 2014 Jan 16.

Elevated cardiac troponin can be seen in patients with left ventricular (LV) hypertrophy and in asymptomatic subjects with a high a priori risk of cardiovascular disease (CVD). In hypertrophic cardiomyopathy (HC) troponin can be detected as well, but little is known about the contribution of LV mass, on the one hand, and the long-term risk of CVD, on the other. In an observational single-center study of 62 patients with HC, without a history of CVD, we assessed the Framingham Heart 10-year risk score (FH10yrs), LV mass index (LVMI) using magnetic resonance imaging, and highly sensitive cardiac troponin T (hs-cTnT). Hs-cTnT (>3 ng/L) was detectable in 74% of patients (46 of 62). Hs-cTnT was elevated in 26% (16 of 62) of patients (ninety-ninth percentile reference limit of 14 ng/L or more). From 3 to 14 ng/L, patients were older, more often had hypertension, and the FH10yrs was higher. Hs-cTnT correlated positively with LVMI ( $p < 0.001$ ) and maximal wall thickness ( $p < 0.001$ ). In addition, LVMI and hypertension were independently associated with increasing hs-cTnT concentrations in linear regression. Using multivariate binary logistic regression, both LVMI and FH10yrs were independently associated with detectable hs-cTnT levels. In contrast, only LVMI was associated with elevated hs-cTnT levels. In CONCLUSION, hs-cTnT was detectable in 3 quarters and elevated in a quarter of our patients with HC. Although detectable hs-cTnT is associated with both LV mass and CVD risk, elevated hs-cTnT relates to LV mass only. This indicates that hypertrophy more than the risk of CVD seems the most important drive for hs-cTnT to occur in these patients.

PMID: 24513467

### **Magnetic Resonance Imaging in Patients with Unilateral Bloody Nipple Discharge; Useful When Conventional Diagnostics are Negative?**

**van Gelder L, Bisschops RH, Menke-Pluymers MB, Westenend PJ, Plaisier PW.**

World J Surg. 2014 Aug 15. [Epub ahead of print]

**BACKGROUND:** Unilateral bloody nipple discharge (UBND) is mostly caused by benign conditions such as papilloma or ductal ectasia. However, in 7-33 % of all nipple discharge, it is caused by breast cancer. Conventional diagnostic imaging like mammography (MMG) and ultrasonography (US) is performed to exclude malignancy. Preliminary investigations of breast magnetic resonance imaging (MRI) assume that it has additional value. With an increasing availability of MRI, it is of clinical importance to evaluate this.

We evaluated the additional diagnostic value of MRI in patients with UBND in the absence of a palpable mass, with normal conventional imaging.

**METHODS:** All women with UBND in the period November 2007-July 2012 were included. In addition to the standard work-up (patient's history, physical examination, MMG, and US), MRI was performed. Data from these examinations and treatment were collected retrospectively.

**RESULTS:** A total of 111 women (mean age 52 years; range 23-80) were included. In nine (8 %) patients, malignancy was suspected on MRI while conventional imaging was normal. In eight (89 %) of these patients, histology was obtained, two by core biopsy and six by terminal duct excision. Benign conditions were found in six patients (86 %) and a (pre-) malignant lesion in two patients. In both cases, it concerned a ductal carcinoma in situ, which was treated with breast-conserving therapy. Moreover, in two cases of (pre)malignancy, the MRI was interpreted as negative.

**CONCLUSION:** In patients with UBND who show no signs of a malignancy on conventional diagnostic examinations, the added value of a breast MRI is limited, since a malignancy can be demonstrated in <2 %.

PMID: 25123174

### **Influence of C-reactive protein levels and age on the value of D-dimer in diagnosing pulmonary embolism.**

**Crop MJ, Siemes C, Berendes P, van der Straaten F, Willemsen S, Levin MD.**

Eur J Haematol. 2014 Feb;92(2):147-55. doi: 10.1111/ejh.12218. Epub 2013 Nov 22.

**BACKGROUND:** Recently, the number of performed CT-angiographies to diagnose pulmonary embolism (PE) rised markedly, while the incidence of PE hardly increased. This low yield of CT-angiography leads to more patients exposed to radiation and higher costs.

**AIM:** The diagnostic value of age, C-reactive protein (CRP) and D-dimer in PE was investigated. Additionally an age-adjusted D-dimer cutoff level [age-adjusted cutoff = age/100 mg/L] was compared with the conventional cutoff level in diagnosing PE for patients  $\geq 50$  yr.

**METHODS:** This observational study (2004-2007) included all consecutive patients suspected for PE presenting on the emergency department with a performed CT-angiography after measuring CRP and D-dimer levels.

**RESULTS:** Of 4609 patients suspected for PE, 1164 patients underwent CT-angiography of whom 309 (26.5%) had PE. Correlation between CRP and D-dimer was 0.42 ( $P < 0.001$ ). D-dimer and age correlated positively ( $r_s = 0.33$ ,  $P < 0.001$ ), but only in patients  $> 50$  yr and independent of PE. Multivariate regression analysis showed significant contribution of age, D-dimer and age-adjusted D-dimer for diagnosing PE, but not for CRP. Using an age-adjusted D-dimer cutoff value increased specificity from 37% to 50%, whereas sensitivity declined from 96% to 90%. Applying this age-adjusted cutoff level in patients  $\geq 70$  yr, specificity increased from 18% to 40%, while sensitivity decreased from 96% to 88%.

**CONCLUSION:** In the prediction of PE, age and D-dimer levels are relevant, while CRP level is not. Using an age-adjusted D-dimer cutoff in older patients remarkably improves the specificity of D-dimer testing with a minor decline in sensitivity. This may increase the yield of CT-angiography in diagnosing PE.

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**KEYWORDS:** C-reactive protein; D-dimer; age-adjusted cutoff; pulmonary embolism; sensitivity; specificity

PMID: 24164492

### **Mesenteric panniculitis: prevalence, clinicoradiologic presentation and 5-year follow-up.**

**van Putte-Katier N, van Bommel EF, Elgersma OE, Hendriksz TR.**

Br J Radiol. 2014 Oct 1:20140451. [Epub ahead of print]. DOI: <http://dx.doi.org/10.1259/bjr.20140451>

A more accurate prevalence of MP on CT is demonstrated. An underlying malignancy may play a role.

To determine prevalence, clinicoradiologic characteristics and outcome of patients with mesenteric panniculitis (MP) in a large hospital-based population.

PMID: 25271412

### **Primary intraosseous manifestation of Rosai-Dorfman disease: 2 cases and review of literature.**

**Duijsens HM, Vanhoenacker FM, ter Braak BP, Hogendoorn PC, Kroon HM.**

JBR-BTR. 2014 Mar-Apr;97(2):84-9.

Rosai-Dorman disease (RDD) is a rare disorder of proliferative histiocytes with an unknown etiology. It is also known as sinus histiocytosis with massive lymphadenopathy. Most patients present with painless cervical lymphadenopathy due to accumulation of histiocytes in the lymph nodes, often in conjunction with fever, elevated leukocyte count and erythrocyte sedimentation rate. Isolated skeletal involvement is very rare.

PMID: 25073237

### **Efficacy and complications of urinary drainage procedures in idiopathic retroperitoneal fibrosis complicated by extrinsic ureteral obstruction.**

**Mertens S, Zeegers AG, Wertheimer PA, Hendriksz TR, van Bommel EF.**

Int J Urol. 2014 Mar;21(3):283-8. doi: 10.1111/iju.12234. Epub 2013 Aug 22.

**OBJECTIVE:** To investigate the efficacy and complications of urinary drainage procedures in patients with idiopathic retroperitoneal fibrosis complicated by ureteral obstruction.

**METHODS:** A retrospective study of 30 idiopathic retroperitoneal fibrosis patients involving 44 obstructed urinary units who underwent urinary drainage from January 2002 through April 2010 was carried out. Data of all diagnostic procedures, blood and urine cultures, and hospital admissions were collected and analyzed.

**RESULTS:** In 12 of 44 (27%) cases, percutaneous nephrostomy was carried out at the first step. Attempted ureteral stenting at the first step was successful in 25 of 32 (79%) cases, of which 20 (80%) cases could be managed successfully by ureteral stenting alone throughout the study period. Successful prolonged urinary drainage with percutaneous nephrostomy alone was accomplished in 10 cases, three at the first step and seven at the second step after failed intraureteral stent insertion or after unsuccessful maintenance of urinary drainage with an intraureteral stent. A total of 21 urinary tract infection episodes occurred in 11 patients. The incidence and accumulated incidence of acute pyelonephritis was 0.062 episodes/100 person-days and 30%, respectively. The incidence and accumulated incidence of urosepsis was 0.015 episodes/100 person-days and 6.6%, respectively. The overall number of complications did not differ between external and internal urinary drainage procedures (percutaneous nephrostomy, 21% vs intraureteral stent, 17.9%;  $P=0.79$ ).

**CONCLUSION:** Both intraureteral stent and percutaneous nephrostomy placement are a safe way to relieve urinary obstruction in idiopathic retroperitoneal fibrosis patients, and they have comparable complication rates. Over time, the need for using both management options in the same patient might be required. Hence, these techniques should be regarded as complementary.

**KEYWORDS:** intraureteral stent; percutaneous nephrostomy; retroperitoneal fibrosis; urinary drainage

PMID: 24033464

### **Technical and radiological image quality comparison of different liquid crystal displays for radiology.**

**Dams FE, Leung KY, van der Valk PH, Kock MC, Bosman J, Niehof SP.**

Med Devices (Auckl). 2014 Oct 31;7:371-7. doi: 10.2147/MDER.S67443. eCollection 2014.

**BACKGROUND:** To inform cost-effective decisions in purchasing new medical liquid crystal displays, we compared the image quality in displays made by three manufacturers.

**METHODS:** We recruited 19 radiologists and residents to compare the image quality of four

liquid crystal displays, including 3-megapixel Barco®, Eizo®, and NEC® displays and a 6-megapixel Barco display. The evaluators were blinded to the manufacturers' names. Technical assessments were based on acceptance criteria and test patterns proposed by the American Association of Physicists in Medicine. Radiological assessments were performed on images from the American Association of Physicists in Medicine Task Group 18. They included X-ray images of the thorax, knee, and breast, a computed tomographic image of the thorax, and a magnetic resonance image of the brain. Image quality was scored on an analog scale (range 0-10). Statistical analysis was performed with repeated-measures analysis of variance. RESULTS: The Barco 3-megapixel display passed all acceptance criteria. The Eizo and NEC displays passed the acceptance criteria, except for the darkest pixel value in the grayscale display function. The Barco 6-megapixel display failed criteria for the maximum luminance response and the veiling glare. Mean radiological assessment scores were  $7.8 \pm 1.1$  (Barco 3-megapixel),  $7.8 \pm 1.2$  (Eizo),  $8.1 \pm 1.0$  (NEC), and  $8.1 \pm 1.0$  (Barco 6-megapixel). No significant differences were found between displays.

CONCLUSION: According to the tested criteria, all the displays had comparable image quality; however, there was a three-fold difference in price between the most and least expensive displays.

KEYWORDS: data display; humans; liquid crystals; radiographic image enhancement; user-computer interface

PMID: 25382988

### **Structural abnormalities and persistent complaints after an ankle sprain are not associated: an observational case control study in primary care.**

van Ochten JM, Mos MC, **van Putte-Katier N**, Oei EH, Bindels PJ, Bierma-Zeinstra SM, van Middelkoop M.

Br J Gen Pract. 2014 Sep;64(626):e545-53. doi: 10.3399/bjgp14X681349.

BACKGROUND: Persistent complaints are very common after a lateral ankle sprain.

AIM: To investigate possible associations between structural abnormalities on radiography and MRI, and persistent complaints after a lateral ankle sprain.

DESIGN AND SETTING: Observational case control study on primary care patients in general practice.

METHOD: Patients were selected who had visited their GP with an ankle sprain 6-12 months before the study; all received a standardised questionnaire, underwent a physical examination, and radiography and MRI of the ankle. Patients with and without persistent complaints were compared regarding structural abnormalities found on radiography and MRI; analyses were adjusted for age, sex, and body mass index.

RESULTS: Of the 206 included patients, 98 had persistent complaints and 108 did not. No significant differences were found in structural abnormalities between patients with and without persistent complaints. In both groups, however, many structural abnormalities were found on radiography in the talocrural joint (47.2% osteophytes and 45.1% osteoarthritis) and the talonavicular joint (36.5% sclerosis). On MRI, a high prevalence was found of bone oedema (33.8%) and osteophytes (39.5) in the talocrural joint; osteophytes (54.4%), sclerosis (47.2%), and osteoarthritis (55.4%, Kellgren and Lawrence grade >1) in the talonavicular joint, as well as ligament damage (16.4%) in the anterior talofibular ligament.

CONCLUSION: The prevalence of structural abnormalities is high on radiography and MRI in patients presenting in general practice with a previous ankle sprain. There is no difference in structural abnormalities, however, between patients with and without persistent complaints.

Using imaging only will not lead to diagnosis of the explicit reason for the persistent complaint.  
KEYWORDS: abnormalities; ankle; general practice; imaging; sprain

PMID: 25179068

### Upregulation of Claudin-4, CAIX and GLUT-1 in distant breast cancer metastases.

Jiwa LS, van Diest PJ, Hoefnagel LD, Wesseling J, Wesseling P; Dutch Distant Breast Cancer Metastases Consortium, Moelans CB.

Collaborators; van de Vijver MJ, van Slooten HJ, **Westenend PJ**, Bart J, Seldenrijk CA, Nagtegaal ID, Oudejans J, **van der Valk P**, van der Groep P, de Vries EG, van der Wall E. BMC Cancer. 2014 Nov 22;14:864. doi: 10.1186/1471-2407-14-864.

BACKGROUND: Several studies have shown that the immunophenotype of distant breast cancer metastases may differ significantly from that of the primary tumor, especially with regard to differences in the level of hormone receptor protein expression, a process known as receptor conversion. This study aimed to compare expression levels of several membrane proteins between primary breast tumors and their corresponding distant metastases in view of their potential applicability for molecular imaging and drug targeting.

METHODS: Expression of Claudin-4, EGFR, CAIX, GLUT-1 and IGF1R was assessed by immunohistochemistry on tissue microarrays composed of 97 paired primary breast tumors and their distant (non-bone) metastases.

RESULTS: In both the primary cancers and the metastases, Claudin-4 was most frequently expressed, followed by GLUT-1, CAIX and EGFR. From primary breast cancers to their distant metastases there was positive to negative conversion, e.g. protein expression in the primary tumor with no expression in its paired metastasis, in 6%, 19%, 12%, 38%, and 0% for Claudin-4 (n.s), GLUT-1 (n.s), CAIX (n.s), EGFR (n.s) and IGF1R (n.s) respectively. Negative to positive conversion was seen in 65%, 47%, 43%, 9% and 0% of cases for Claudin-4 ( $p = 0.049$ ), GLUT-1 ( $p = 0.024$ ), CAIX ( $p = 0.002$ ), EGFR (n.s.) and IGF1R (n.s.) respectively. Negative to positive conversion of Claudin-4 in the metastasis was significantly associated with tumor size ( $p = 0.015$ ), negative to positive conversion of EGFR with negative PR status ( $p = 0.046$ ) and high MAI ( $p = 0.047$ ) and GLUT-1 negative to positive conversion with (neo)adjuvant chemotherapy ( $p = 0.039$ ) and time to metastasis formation ( $p = 0.034$ ). CAIX and GLUT-1 expression in the primary tumor were significantly associated with high MAI ( $p = 0.008$  and  $p = 0.038$  respectively).

CONCLUSION: Claudin-4 is frequently expressed in primary breast cancers but especially in their metastases and is thereby an attractive membrane bound molecular imaging and drug target. Conversion in expression of the studied proteins from the primary tumor to metastases was fairly frequent, except for IGF1R, implying that the expression status of metastases cannot always be reliably predicted from the primary tumor, thereby necessitating biopsy for reliable assessment.

PMID: 25417118

### Hyaline fibromatosis of Hoffa's fat pad in a patient with a mild type of hyaline fibromatosis syndrome.

**Van Raak SM**, Meuffels DE, Van Leenders GJ, Oei EH.

Skeletal Radiol. 2014 Apr;43(4):531-4. doi: 10.1007/s00256-013-1746-9. Epub 2013 Oct 17.

Hyaline fibromatosis syndrome (HFS) is a rare, homozygous, autosomal recessive disease, characterized by deposition of hyaline material in skin and other organs, resulting in esthetic



problems, disability, and potential life-threatening complications. Most patients become clinically apparent in the first few years of life, and the disorder typically progresses with the appearance of new lesions. We describe a rare case of a 20-year-old patient with juvenile-onset mild HFS who presented with a history of progressive anterior knee pain. Detailed magnetic resonance (MR) imaging findings with histopathological correlation are presented of hyaline fibromatosis of Hoffa's fat pad, including differential diagnosis. The diagnosis of HFS is generally made on basis of clinical and histopathological findings. Imaging findings, however, may contribute to the correct diagnosis in patients who present with a less typical clinical course of HFS.

PMID: 24132693

### Reduced neonatal lung function and wheezing illnesses during the first 5 years of life.

van der Gugten AC1, Uiterwaal CS, **van Putte-Katier N**, Koopman M, Verheij TJ, van der Ent CK.

Eur Respir J. 2013 Jul;42(1):107-15. doi: 10.1183/09031936.00214711. Epub 2012 Nov 8.

Comment in: Infant lung function and wheeze in later childhood in the Southampton Women's Survey. [Eur Respir J. 2014]

Studies of reduced neonatal lung function and wheezing illnesses during childhood show conflicting results. The aim of our study was to assess the association between resistance (Rrs) and compliance (Crs) of the respiratory system by using the single occlusion technique (SOT) and prospectively collected wheezing illnesses during the first 5 years of life in a large birth cohort. SOT was performed during natural sleep before the age of 2 months. Information about wheezing illnesses was collected from the electronic patient file. 549 infants had a successful SOT measurement and complete medical records. Every kPa·L(-1)·s(-1) increase in Rrs was associated with 10% more consultations in the first 3 years of life. Every 10 mL·kPa(-1) increase in Crs was associated with a 14% reduction in consultations in the first 3 years of life, 27% in the fourth to fifth years of life, and a lower probability of having asthma at the age of 5 years (OR 0.66). Children with late-onset or persistent wheezing had significant lower Crs values than their peers. An increased neonatal resistance is associated with more wheezing illnesses during infancy, while a reduced neonatal compliance is associated with more wheezing illnesses during the first 5 years of life, a late-onset or persistent wheezing phenotype, and asthma.

PMID: 23143545

### Sigmoid Cancer versus Chronic Diverticular Disease: Differentiating Features at CT Colonography.

Lips LM, Cremers PT, Pickhardt PJ, **Cremers SE**, Janssen-Heijnen ML, de Witte MT, Simons PC. (ASz bijdrage??)

Radiology. 2014 Nov 26:132829. [Epub ahead of print]

Purpose To retrospectively identify morphologic findings at computed tomographic (CT) colonography that are the most reliable in the differentiation of masslike chronic diverticular disease from sigmoid carcinoma in a large patient cohort. Materials and METHODS This study was approved by the institutional review boards. The need for signed consent was waived for this retrospective study. The cohort consisted of 212 patients (mean

age, 68 years; 113 women, 99 men) with focal masslike findings in the sigmoid colon at CT colonography, representing chronic diverticular disease (n = 97) or sigmoid carcinoma (n = 115). CT colonography studies were scored according to presence or absence of potential discriminators by a panel of four readers in consensus. Sensitivity, specificity, positive predictive value ( PPV positive predictive value ), negative predictive value ( NPV negative predictive value ), and accuracy were calculated, and multivariate analysis was performed.

**RESULTS** Absence of diverticula in the affected segment showed high NPV negative predictive value and PPV positive predictive value (0.95 and 0.93, respectively). Also, shoulder phenomenon showed a high NPV negative predictive value (0.92) and PPV positive predictive value (0.75). Segment length of 10 cm or less ( NPV negative predictive value , 0.85; PPV positive predictive value , 0.61) and destroyed mucosal folds ( NPV negative predictive value , 1.00; PPV positive predictive value , 0.62) had a high NPV negative predictive value but a low PPV positive predictive value . Although segments affected by carcinoma often showed straightened and eccentric growth patterns, no thick fascia sign, and more and larger local-regional lymph nodes (all P < .05), NPV negative predictive value was insufficient for discrimination ( NPV negative predictive value  $\leq$  0.66). Combination of absence of diverticula and presence of shouldering showed a high diagnostic certainty (93%).

**CONCLUSION** Carcinoma is best differentiated from masslike diverticular disease by the absence of diverticula in the affected segment and the presence of shoulder phenomenon. © RSNA, 2014.

PMID: 25426771

### The added diagnostic value of dynamic contrast-enhanced MRI at 3.0 T in nonpalpable breast lesions.

Merckel LG, Verkooijen HM, Peters NH, Mann RM, Veldhuis WB, Storm RK, Weits T, Duivivier KM, van Dalen T, Mali WP, Peeters PH, van den Bosch MA.

PLoS One. 2014 Apr 8;9(4):e94233. doi: 10.1371/journal.pone.0094233. eCollection 2014.

Received October 11, 2013; Accepted March 13, 2014; Published April 8, 2014

**OBJECTIVE:** To investigate the added diagnostic value of 3.0 Tesla breast MRI over conventional breast imaging in the diagnosis of in situ and invasive breast cancer and to explore the role of routine versus expert reading.

**MATERIALS AND METHODS:** We evaluated MRI scans of patients with nonpalpable BI-RADS 3-5 lesions who underwent dynamic contrast-enhanced 3.0 Tesla breast MRI. Initially, MRI scans were read by radiologists in a routine clinical setting. All histologically confirmed index lesions were re-evaluated by two dedicated breast radiologists. Sensitivity and specificity for the three MRI readings were determined, and the diagnostic value of breast MRI in addition to conventional imaging was assessed. Interobserver reliability between the three readings was evaluated.

**RESULTS:** MRI examinations of 207 patients were analyzed. Seventy-eight of 207 (37.7%) patients had a malignant lesion, of which 33 (42.3%) patients had pure DCIS and 45 (57.7%) invasive breast cancer. Sensitivity of breast MRI was 66.7% during routine, and 89.3% and 94.7% during expert reading. Specificity was 77.5% in the routine setting, and 61.0% and 33.3% during expert reading. In the routine setting, MRI provided additional diagnostic information over clinical information and conventional imaging, as the Area Under the ROC Curve increased from 0.76 to 0.81. Expert MRI reading was associated with a stronger improvement of the AUC to 0.87. Interobserver reliability between the three MRI readings was fair and moderate.

CONCLUSION: 3.0 T breast MRI of nonpalpable breast lesions is of added diagnostic value for the diagnosis of in situ and invasive breast cancer.

PMID: 24713637

## **Effect of Methotrexate Use and Erythrocyte Methotrexate Polyglutamate on Glycosylated Hemoglobin in Rheumatoid Arthritis**

de Rotte MC, de Jong PH, den Boer E, Pluijm SM, Özcan B, Weel AE, Lindemans J, Hazes JM, de Jonge R.

Arthritis Rheumatol. 2014 Aug;66(8):2026-36. doi: 10.1002/art.38652.

To investigate whether methotrexate (MTX) use, as compared to other therapies, and erythrocyte methotrexate polyglutamate (MTXGlu) concentrations are associated with changes in glycosylated hemoglobin (HbA1c) levels in rheumatoid arthritis (RA) patients.

PMID: 24692301

## **High frequency of adult attention deficit hyperactivity disorder among fibromyalgia patients in the Netherlands: should a systematic collaboration between rheumatologists and psychiatrists be sought?**

Derksen MT, Vreeling MJ, Tchetverikov I.

Clin Exp Rheumatol. 2014 Aug 15. [Epub ahead of print]

PMID: 25152225

## **Randomised comparison of initial triple DMARD therapy with methotrexate monotherapy in combination with low-dose glucocorticoid bridging therapy; 1-year data of the tREACH trial.**

de Jong PH, Hazes JM, Han HK, Huisman M, van Zeben D, van der Lubbe PA, Gerards AH, van Schaeybroeck B, de Sonnaville PB, van Krugten MV, Luime JJ, Weel AE.

Ann Rheum Dis. 2014 Jul;73(7):1331-9. doi: 10.1136/annrheumdis-2013-204788. Epub 2014 May 1.

**OBJECTIVES:** To compare 1-year clinical efficacy of (1) initial triple disease-modifying anti-rheumatic drug therapy (iTDT) with initial methotrexate (MTX) monotherapy (iMM) and (2) different glucocorticoid (GC) bridging therapies: oral versus a single intramuscular injection in early rheumatoid arthritis.

**METHODS:** In a single-blinded randomised clinical trial patients were randomised into three arms: (A) iTDT (methotrexate+sulfasalazine+hydroxychloroquine) with GCs intramuscularly; (B) iTDT with an oral GC tapering scheme and (C) MTX with oral GCs similar to B. Primary outcomes were (1) area under the curve (AUC) of Health Assessment Questionnaire (HAQ) and Disease Activity Score (DAS) and (2) the proportion of patients with radiographic progression.

**RESULTS:** 281 patients were randomly assigned to arms A (n=91), B (n=93) or C (n=97). The AUC DAS and HAQ were respectively -2.39 (95% CI -4.77 to -0.00) and -1.67 (95% CI -3.35 to 0.02) lower in patients receiving iTDT than in those receiving iMM. After 3 months, treatment failure occurred less often in the iTDT group, resulting in 40% fewer treatment intensifications. The difference in treatment intensifications between the arms required to maintain

the predefined treatment goal remained over time. No differences were seen between the two GC bridging therapies. Respectively 21%, 24% and 23% of patients in arms A, B and C had radiographic progression after 1 year. Patients receiving iTDT had more adjustments of their medication owing to adverse events than those receiving iMM.

CONCLUSION: Treatment goals are attained more quickly and maintained with fewer treatment intensifications with iTDT than with iMM. However, no difference in radiographic progression is seen. Both GC bridging therapies are equally effective and, therefore, both can be used.

TRIAL REGISTRATION NUMBER: ISRCTN26791028.

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PMID: 24788619

## **Efficacy and complications of urinary drainage procedures in idiopathic retroperitoneal fibrosis complicated by extrinsic ureteral obstruction.**

**Mertens S, Zeegers AG, Wertheimer PA, Hendriksz TR, van Bommel EF.**

Int J Urol. 2014 Mar;21(3):283-8. doi: 10.1111/iju.12234. Epub 2013 Aug 22.

**OBJECTIVE:** To investigate the efficacy and complications of urinary drainage procedures in patients with idiopathic retroperitoneal fibrosis complicated by ureteral obstruction.

**METHODS:** A retrospective study of 30 idiopathic retroperitoneal fibrosis patients involving 44 obstructed urinary units who underwent urinary drainage from January 2002 through April 2010 was carried out. Data of all diagnostic procedures, blood and urine cultures, and hospital admissions were collected and analyzed.

**RESULTS:** In 12 of 44 (27%) cases, percutaneous nephrostomy was carried out at the first step. Attempted ureteral stenting at the first step was successful in 25 of 32 (79%) cases, of which 20 (80%) cases could be managed successfully by ureteral stenting alone throughout the study period. Successful prolonged urinary drainage with percutaneous nephrostomy alone was accomplished in 10 cases, three at the first step and seven at the second step after failed intraureteral stent insertion or after unsuccessful maintenance of urinary drainage with an intraureteral stent. A total of 21 urinary tract infection episodes occurred in 11 patients. The incidence and accumulated incidence of acute pyelonephritis was 0.062 episodes/100 person-days and 30%, respectively. The incidence and accumulated incidence of urosepsis was 0.015 episodes/100 person-days and 6.6%, respectively. The overall number of complications did not differ between external and internal urinary drainage procedures (percutaneous nephrostomy, 21% vs intraureteral stent, 17.9%;  $P=0.79$ ).

**CONCLUSION:** Both intraureteral stent and percutaneous nephrostomy placement are a safe way to relieve urinary obstruction in idiopathic retroperitoneal fibrosis patients, and they have comparable complication rates. Over time, the need for using both management options in the same patient might be required. Hence, these techniques should be regarded as complementary.

**KEYWORDS:** intraureteral stent; percutaneous nephrostomy; retroperitoneal fibrosis; urinary drainage

PMID: 24033464

## The effect of a slower than standard dose escalation scheme for dipyridamole on headaches in secondary prevention therapy of strokes: a randomized, open-label trial (DOSE).

de Vos-Koppelaar NC, Kerkhoff H, de Vogel EM, Zock E, Dieleman HG.

Cerebrovasc Dis. 2014;37(4):285-9. doi: 10.1159/000360751. Epub 2014 May 7.

**BACKGROUND:** Combination therapy with acetylsalicylic acid and dipyridamole is first-line treatment in secondary prevention of strokes. Approximately 40% of patients report headache as a side effect of dipyridamole. Dose escalation of dipyridamole reduces this side effect. In practice, different dose escalation schemes are used. In theory, slower dose escalation than a standard scheme reduces headaches even more. This study aimed to find the best dose escalation scheme for prevention of headaches as a side effect of dipyridamole in the secondary prevention of strokes.

**METHODS:** In this randomized, open-label, 4-week trial, 114 patients who had an ischemic stroke or transient ischemic attack were randomized to receive either a standard or slow dose escalation scheme of dipyridamole. Participants were asked to report the four most common side effects of dipyridamole in a study diary on study days 1, 3, 5, 7, 14, 21 and 28. They were asked to score headache intensity on a visual analog scale (VAS). Participants were unaware that the trial was focused on headaches. Primary end point was to determine if a slow dose escalation scheme reduces the percentage of patients with headaches. Secondary **OBJECTIVE** was to determine the number of patients who discontinued treatment with dipyridamole because of headaches.

**RESULTS:** Overall 37 patients (38%) of the final population reported headache, 19 (39%) in the standard dose escalation group and 18 (37%) in the slow dose escalation group ( $p = 1.0$ ). In the standard dose escalation group patients scored headaches (VAS >4) on an average of 3.3 days and patients in the slow dose escalation group on 3.6 days ( $p = 0.82$ ). Mean VAS scores on study days 1, 3, 5, 7, 14 and 21 ranged from 1.4 to 3.7 in both groups. These scores did not differ significantly. However, on day 28 patients scored a significantly lower mean VAS score in the standard dose escalation group than in the slow dose escalation group (2.5 vs. 4.8;  $p = 0.05$ ). In the standard dose escalation group 6 patients (11%) discontinued treatment because of side effects of dipyridamole and 3 patients (6%) in the slow dose escalation group ( $p = 0.49$ , Fisher's exact test).

**CONCLUSION:** We showed that slower than standard dose escalation of dipyridamole in combination therapy with acetylsalicylic acid does not reduce headaches as a side effect. The use of such schemes should be discontinued in clinical practice. Slow dose escalation might, however, reduce the number of patients who discontinue treatment, but further research is needed to confirm this.

PMID: 24819911

## **II Overige publicaties, voordrachten en posters**



# Anesthesiologie

## Boek of hoofdstuk in en boek

Dekker-van Doorn C.M., Wauben L.S.G.L., Wijngaarden van J.D.H., Meulen van F., **Koopman-van Gemert A.W.M.M.**, Huijsman R., Lange J.F. Time Out Procedure in the Operating Theatre: arguments for improved teamwork.  
In: A Delicate Balance. Adaptive Design and Team Learning in the Operating Theatre.  
ISBN/EAN: 978-94-6299-004-3. 2014: pag 123-143.

## Voordrachten

- Ates-Mobach N.B.** Fysiologie/anesthesie bij het jonge kind.  
Symposium "Rondom kinderchirurgie", 8 februari 2014, Albert Schweitzer ziekenhuis, Dordrecht
- Schyns - van den Berg A.M.J.V.** Is er een rol voor lachgas tijdens procedurele sedatie bij kinderen. Symposium "Rondom kinderchirurgie", 8 februari 2014, Albert Schweitzer ziekenhuis, Dordrecht
- Gültuna I, Aukes J.A. , Gorp van E.J.J.A.A.** Training Neuromodulation voor Turkse delegatie Anesthesiologen. 17 en 18 februari 2014. Albert Schweitzer ziekenhuis, Dordrecht.
- Koopman-van Gemert A.W.M.M.** Massieve bloedtransfusie. Richtlijnen en wat nu?" CEEA cursus 2014: 6 en 13 maart 2014 en 2 en 3 oktober 2014 NH Atlantic, Den Haag-Kijkduin
- Schyns - van den Berg A.M.J.V.** State of the art lecture: vruchtwaterembolie  
Nascholing NVA, 17 maart 2014, Golden Tulip Doorwerth
- Koopman-van Gemert A.W.M.M.** Embolization and Cell Salvage, what, how and when.  
5e Refreshercourse. Keizersnede and nachtmerrie-scenario's.  
27 maart 2014. Academiegebouw, Utrecht
- Schyns-van den Berg A.M.J.V.** Vruchtwaterembolie: anafylactisch syndroom van de zwangerschap. 5e Refreshercourse. Keizersnede and nachtmerrie-scenario's.  
27 maart 2014. Academiegebouw, Utrecht
- Gültuna I.** 'Fundamental course' St. Jude Medical. Training anesthesiologen. Albert Schweitzer Ziekenhuis, 2 april 2014. Dordrecht
- Koopman-van Gemert A.W.M.M.** Richtlijn Herziening Neuraxisblokkade,  
Nascholing NVA, 13 mei 2014, Golden Tulip Doorwerth
- Koopman-van Gemert A.W.M.M.** Neuraxisblokkade en antistolling. NVA-dagen, 23 mei.  
MEC, Maastricht

**Koopman-van Gemert A.W.M.M.** . "Groot bloedverlies; bloedlink!" Symposium: TOPpen of Tobben: Bloedlynx, 11 juni 2014. Burger's Zoo, Arnhem

**Koopman-van Gemert A.W.M.M.**, So-Osman C., and Nelissen R.G.H.H. .  
Alternatives to Blood Transfusion. The 1st Annual World Congress of Orthopaedics-2014 (WCORT-2014) September 12-14, 2014 Xi'an, China

**So K.L.** Health and Social Care Priorities for Ireland – Learning with Europe. Implementation of Patient Safety Initiatives: Organisatie: PASQ (European Union Network for Patient Safety and Quality of Care)/ HIOA (Health Information and Quality Authority "The Deteriorating patient" (keynote). 2 oktober 2014, Dublin, Ierland

**Koopman-van Gemert A.W.M.M.** Nieuwe richtlijn neuraxisblokkade en antistolling  
Jeroen Bosch ziekenhuis, 4 november 2014

**So K.L.** Enhanced Surgical Recovery: Implementation of a PGDT Protocol. A future STANDARD or just another Trend. 27-11-2014, Hasselt België:

**Koopman-van Gemert A.W.M.M.** Omniplamsa Pro-Con discussie. PRO: prof. dr. F.W.G. Leebeek, internist-hematoloog, Erasmus MC. CON: mw. dr. A.W.M.M. Koopman-van Gemert, Kliniek van Bloedtransfusie. Bloed in "Beweging". 13 november 2014 Erasmus MC, Rotterdam

**Koopman-van Gemert A.W.M.M.** Perioperatief beleid antistolling,  
Rondom Nieuwe Orale Anticoagulantia: "know the ins and outs". 20 november in het Albert Schweitzer ziekenhuis, Dordrecht.

**Koopman-van Gemert A.W.M.M.** Pre-medicatie, zin / onzin. Pediatric Autumn Seminar 2014. Pediatric Anesthesie in Nederland "One Step Beyond" .  
29 november 2014 NBC Congres. NBC Congrescentrum te Nieuwegein

**Koopman-van Gemert A.W.M.M.** Een Ery te weinig (Cell Saver). Pediatric Autumn Seminar 2014. Pediatric Anesthesie in Nederland "One Step Beyond" . 29 november 2014 NBC Congres. NBC Congrescentrum te Nieuwegein

**So K.L.** "Spoed Interventie Systeem" Organisatie ASz Symposium "Vroege herkenning en behandeling van de vitaal bedreigde patient: nieuwe inzichten en perspectieven". 8 december 2014, Dordrecht

**So K.L.** "Continue monitoring op de verpleegafdeling" Organisatie ASz  
Symposium "Vroege herkenning en behandeling van de vitaal bedreigde patient: nieuwe inzichten en perspectieven". 8 december 2014, Dordrecht

Hamming J, F., Gans R.O.B., **Koopman-van Gemert A.W.M.M.** Urlings-Strop L.  
MMV-congres Voortdurend bewegen. Workshop-Aantoonbaar werken aan verbeteren.  
10 december NCB-gebouw Nieuwegein.

**Koopman-van Gemert A.W.M.M.**

Pro / Condebat protocol massaal bloedverlies. Pro: Dr. Ankie Koopman-van Gemert; Con: Dr. Alexander Vlaar. 3de Christmas Stollings Symposium.

19 december 2014, AMC, Amsterdam.

**Koopman-van Gemert A.W.M.M.**, Management van Groot Bloedverlies

Symposium "Rendom Bloedmanagement" 13 december in het Albert Schweitzer ziekenhuis, Dordrecht.

**Posters**

Bodegom-Vos L. van, Voorn V. M., Vliet Vlieland T. P., Dahan, **Koopman-van Gemert**

**A.W.M.M.**, Vehmeijer S. B., So-Osman C., Nelissen R. G. , Marang-van de Mheen P. J.

Cell Salvage in Hip and Knee Arthroplasty: A Meta-Analysis of Randomised Controlled Trials  
15th Annual NATA Symposium which took place on April 10-11, 2014 in Porto, Portugal.

# Cardiologie

## Voordrachten en poster

**M.J.M. Kofflard**, Echoavond Albert Schweitzer ziekenhuis, Dordrecht. "beelden uit de periferie". 27 maart 2014. Accreditatie: 2 uur voor cardiologen en echolaboranten.

**M.J.M. Kofflard**, symposium Hypertrofische Cardiomyopathie van het RadboudUMC "tips, tricks and risks". Landmark Wijnfort Lent, Nijmegen. 26 maart 2014. Accreditatie: 2 uur voor cardiologen.

Liesting C, Brugts JJ, **Kofflard MJM**, Sprangers S, Fouraux M, Kitzen JJEM, Boersma H, Levin M-D. Treatment of patients with Her2Neu positive breast cancer with chemotherapy and Her2Neu-receptor blocking agents : detection of cardiotoxicity by the use of serum biomarkers, 3D-echocardiography and cardiac MRI. NVVC 2014

Cramer GE, Gommans DHF, Michels M, Fouraux M, Bakker J, Verheugt FWA, ten Cate FJ, Brouwer MA, **Kofflard MJM**. Stress-induced troponin rise in patients with hypertrophic cardiomyopathy: associations with sarcomere mutation and MRI characteristics. Poster presentation at European Muscle conference 2013. NVVC 2014;

Gommans DHF, Cramer GE, Bakker J, Fouraux MA, Michels M, ten Cate FJ, Verheugt FWA, Brouwer MA, **Kofflard MJM**. In hypertrophic cardiomyopathy the presence of edema is associated with a more advanced stage of disease. Oral presentation at AHA scientific sessions 2013. Najaarscongres NVVC 2014

Brugts JJ, van Gent M, Caliskan K, **Kofflard MJ**. Repetitive stress-induced cardiomyopathy due to inverted Takotsubo in exaggerated sympathetic stimulation by pheochromocytoma. Eur Heart J Cardiovasc Imag 2014;

## Overige publicaties

**Koper MC**, Mathijssen NMC, van Ravenswaay Claasen HH, Witt F, Morlock MM, Vehmeijer SBW. Pseudotumor After Bilateral Ceramic-on-Metal Total Hip Arthroplasty: A Case Report  
JBJS Case Connector, 2014; 4:1-6. doi: 10.2106/JBJS.CC.M.00209.

## Voordrachten

**Plaisier P**, Maat A, Damhuis R. Also in the Netherlands increased postoperative mortality after lung cancer surgery on Fridays.  
Interact Cardiovasc Thorac Surg 2014;18(suppl 1):S1. doi: 10.1093/icvts/ivu167.2

**Vegt PA**, Nellensteijn D. Percutaneous intramedullary polymeric osteosynthesis: a case series.  
Caribb Med J 2014;76:60.

**Buisman FE**, Moerman S, **Punt BJ**. Tips and tricks for supracondylar humeral fractures.  
Jaarvergadering NOV, Amsterdam, Februari.  
Geaccrediteerd door de Nederlandse Orthopeden Vereniging.

**Vegt PA**. Illumi-Os : New developments in bone fixation – from Lambotte to bonedotter.  
Brusselse Traumadag, Brussel, Februari.  
Geaccrediteerd door Hôpitaux Universitaires ULB Brugmann & Erasme.

**Menke-Pluymers MBE**. Oncoplastische chirurgie: How I did and do it.  
1st Dutch Breast Surgeons Course, Maastricht, Februari.  
Geaccrediteerd door de Nederlandse Vereniging voor Chirurgische Oncologie.

**Vegt PA**. Treating a fracture of a pathological femur with IlluminOss Photodynamic Bone Stabilisation System.  
Congress of the American Academy of Orthopaedic Surgeons, New Orleans, Maart.  
Geaccrediteerd door American Academy of Orthopaedic Surgeons.

Molendijk M, Oostenbroek R, **Plaisier P**, van de Ridder M and Surgeons & Residents of the AMC Region. Surgeons' feedback perception.  
2014 Ottawa Conference, Ottawa, Canada, April.  
Geaccrediteerd door de Canadian Conference on Medical Education.

**Bartels SAL**, Gardenbroek TJ, Vlug MS, Aarts M, Ponsioen CY, Tanis PJ, Buskens CJ, Bemelman WA. Close rectal dissection versus TME in ileo-anale pouch-chirurgie: korte termijn resultaten van een gerandomiseerde studie.

Chirurgendagen, Nederlandse Vereniging voor Heelkunde, Veldhoven, Mei.  
Geaccrediteerd door de Nederlandse Vereniging voor Heelkunde.

**Vegt PA**. Innovations in Fracture Treatment.  
ZWOT, Rotterdam, Mei.

**Plaisier P**, Maat A, Damhuis R. Also in the Netherlands increased postoperative mortality after lung cancer surgery on Fridays.

22nd European Conference on General Thoracic Surgery, Kopenhagen, Denemarken, Juni.  
Geaccrediteerd door de European Society for Thoracic Surgery.

**Vegt PA**. Percutaneous intramedullary polymeric osteosynthesis: a case series.

12th Annual Clinical Conference, Curacao, Juni.  
Geaccrediteerd door Trinidad & Tobago Medical Association.

**Vegt PA**. Percutaneous intramedullary polymeric rod osteosynthesis.

Hand and Wrist, Herzliya (Israël), Juni.  
Geaccrediteerd door Israeli Society for Surgery of the Hand.

**Troquay SAM, Vegt PA**. Results from the use of a percutaneous intramedullary polymeric osteosynthesis- a case series.

Osteosynthese International Congres 2014 : "Nails and More", Krems, Oostenrijk, September.  
Geaccrediteerd door Gerhard Küntscher Society.

Schmitz AMTh, Veldhuis WB, **Menke-Pluijmers MBE**, et al. 7T Breast MR Imaging for Preoperative Characterization of Breast Cancer using One-stop-shop Dynamic Contrast Enhancement, Diffusion-Weighted Imaging, and Phosphorus MR Spectroscopy.

Nederlandse Radiologendagen 2014; 's-Hertogenbosch, September.  
Geaccrediteerd door de Nederlandse Vereniging voor Radiologie.

**Drukker CA**. Molecular profiling for risk stratification and treatment of breast cancer.

International Istanbul Breast Cancer Conference, Istanbul, Turkije, Oktober.  
Geaccrediteerd door International Istanbul Breast Cancer Conference.

**Drukker CA**. Overbehandeling voorkomen.

Scholingscursus 'Mammacarcinoom' XII, Zeist, Oktober.  
Geaccrediteerd door Nederlandse Vereniging voor Chirurgische Oncologie.

**Troquay SAM, Sier MF, Bartels SAL, Meyenfeldt von EM, Oostenbroek RJ**. The value of contrast and endoscopic evaluation of the anastomosis, prior to closure of loop ileostomy after low anterior resection.

NvGE Najaarsvergadering, Veldhoven, Oktober.  
Geaccrediteerd door Nederlandse Vereniging voor Gastro-Enterologie.

Molendijk MJW, Oostenbroek RJ, Huiskens J, **van Loenhout RB, Plaisier PW**, van de Ridder JMM. Percepties over luistervaardigheden, vertrouwen in eigen kunnen en

geven van feedback: hoe vergaat het chirurgen?  
NVMO congres 2014, Egmond aan Zee, November.  
Geaccrediteerd door Nederlandse Vereniging voor Medisch Onderwijs.

Arts-assistenten Vereniging ASz, Boer DP, Hagens RPA, **Hoekstra LT**, Schoenmakers R, van de Ridder JMM, Oostenbroek RJ. Op welke wijze kan de arts-assistentenvereniging smeerolie zijn binnen de COC om de kwaliteit van de eigen opleiding te verbeteren?  
NVMO congres 2014, Egmond aan Zee, November.  
Geaccrediteerd door Nederlandse Vereniging voor Medisch Onderwijs.

Kuijjer A, van Bommel ACM, **Drukker CA**, van der Heiden-van der Loo M, van Dalen T. De invloed van het 70-genen profiel MammaPrint op het geven van adjuvant chemotherapie bij borstkankerpatiënten: een observationele impact studie.  
Najaarsvergadering, Utrecht, December.  
Geaccrediteerd door Nederlandse Vereniging voor Heelkunde.

van Rossem CC, van Geloven AAW, Bemelman WA et al (**Bartels SAL, Plaisier PW**). Landelijke 'snapshot' studie: uitkomsten van acute appendectomie.  
Najaarsvergadering, Utrecht, December.  
Geaccrediteerd door Nederlandse Vereniging voor Heelkunde.

Schmitz AMTh, Veldhuis WB, **Menke-Pluijmers MBE**, et al. 7T Breast MR Imaging for Characterization of Early Breast Cancer using Dynamic Contrast Enhancement, Diffusion-Weighted Imaging, and Phosphorus Spectroscopy.  
RSNA World Congres 2014; Chicago, December.  
Geaccrediteerd door de Radiological Society North America.

## Posters

**van Gelder L**, Buisman F, Menke-Pluymers MBE, Bisschops RHC, Plaisier PW, Westenend PJ. Non primary breast malignancies: a single's institution's experience of a diagnostic challenge.  
Eur J Cancer 2014;50 (suppl 2): S65-6.

**van Gelder L**, Gerbrands K, Menke-Pluymers MBE, Westenend PJ, Plaisier PW, Bisschops RHC. The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma.  
Eur J Cancer 2014;50 (suppl 2): S68.

Kamp K, van Det M, **Lamme B**, Veeger N, Pierie J-P. Validity and reliability of goals assessment in novice trainees performing a laparoscopic cholecystectomy.  
Jaarcongres Nederlandse Vereniging voor Endoscopische Chirurgie (NVEC), Maart 2014, Amsterdam.

**Troquay SAM, Sier MF, von Meyenfeldt EM**, Oostenbroek RJ. Moet de anastomose voor opheffen van ontlastend ileostoma eerst onderzocht worden?  
Chirurgendagen 2014, Nederlandse Vereniging voor Heelkunde, Mei 2014, Veldhoven.

Sigterman TA, Krasznaï AG, **Troquay SAM**, Snoeijs MGJ, Rensma HG, Bouwman LH. RCT VNUS compressietherapie 4 vs 72 uur.  
Chirurgendagen 2014, Nederlandse Vereniging voor Heelkunde, Mei 2014, Veldhoven.

Kamp KH, van Det MJ, Hoff C, **Lamme B**, Veeger NJGM, Pierie JPEN. Goals assessment of three keysteps in laparoscopic cholecystectomy.

14th World Congress of Endoscopic Surgery (EAES), Juni 2014, Parijs.

**van der Ende B**, Mathijssen NMC, ten Broek MRJ, Goossens RHM, Kleinrensink GJ, Kraan GA. The average radio-carpal joint. A pilot study in the development of radio-carpal osteoarthritis

19th Congress of the Federation of European Societies for Surgery of the Hand, Juni 2014, Parijs.

Molendijk M., **Lamme B**, **Plaisier P**, Oostenbroek R, van de Ridder M. Is there a relationship between surgeon's self-efficacy, listening skills and self-reported feedback skills?

2014 Meeting of the Association for Medical Education in Europe, Augustus 2014, Budapest, Hongarije.

Leeneman B, Franken MG, Blommestein MH, van Gils CWM, van der Meijde E, Wouters MWJM, **Plaisier PW**, Kruit WHJ, van Ruth S, ten Tije AJ, Hendriks MP, Coupé VMH, Uyl – de Groot CA. The importance of long-term surveillance of stage IB melanomas: low survival subsequent to recurrence.

17th Annual European Congress of the International Society for Pharmacoeconomics and Outcome Research (ISPOR), November 2014, Amsterdam.

Nijenhuis MV, Groen E, Dekker TJ, **Drukker CA**, Sanders J, Smit VT, Linn S, Rutgers EJ, Wesseling J. Tumor heterogeneity impairs robustness of Ki67 scoring in breast cancer.

San Antonio Breast Cancer Symposium 2014, San Antonio (TX), Verenigde Staten, December 2014.

Kuijjer A, van Bommel ACM, van der Heiden- van der Loo M, **Drukker CA**, van Dalen T. The 70-gene signature affects adjuvant systemic treatment decisions in breast cancer patients: A population-based, observational study.

San Antonio Breast Cancer Symposium 2014, San Antonio (TX), Verenigde Staten, December 2014.



# Gynaecologie

## Overige publicaties

Portfolio-training Gynaecologie in de OOR-ZWN. Kate-Booij M ten, Kooi GS, Blok G, **Nieuwenhuizen-De Boer GM**, Oostwaard M van, Speksnijder L, Ridder M van de. Nederlandse Vereniging voor Medisch Onderwijs, Egmond aan Zee. November 2014.

## Voordrachten

Albert Event over het Kwetsbare zwangeren project. 25 juni

## Posters

**Nieuwenhuizen- De Boer GM**, Gerestein CG, Eijkemans MJC, Burger CW, Kooi GS. Nomogram for 30-day morbidity after primary cytoreductive surgery for advanced stage ovarian cancer. Eur. J.Gynaecol Oncol. Accepted December 2014.  
Poster NVMO-congres 6-11-2014:

# Interne geneeskunde

## Promoties

Titel: "Encapsulating Peritoneal Sclerosis, A study on pathophysiology, clinical aspects and management".

Door: S.M. (Sayed Meeland) Habib (promovendus).

Copromotor: dr. M.R. Korte

14 mei 2014 te Erasmus Universiteit Rotterdam

## Overige publicaties

"Feasability en effectiviteit van Melfalan-prednison-bortezomib (MPV) bij patienten  $\geq$  75 jaar met een nieuw gediagnosticeerd multipel myeloom; een niet gerandomiseerde fase II-studie."

S. Zweegman, **M-D. Levin**, N.W.C.J. van de Donk, W. Ghideyalemayehu, P. Sonneveld. *NTvH* 2014; 11: 29-36.

Janssen J.J.W.M., Cornelissen J.J., Posthuma E.F.M., Falkenburg J.H.F., Biemond B.J., Bos G.M.J., Petersen E.J., Schattenberg A.V.M.B., Smit W.M., Verhoef G.E.G., Vellenga E., **Westerweel P.E.**, Ossenkoppele G.J. Richtlijnen voor de behandeling van chronische myeloïde leukemie anno 2014. *Ned Tijdschr Hematol* 2014;11:185-98

## Voordrachten en posters

**Pelkmans L**, Vermeer E, Westenend P, Hendriksz TR, van Bommel EFH. Idiopathic retroperitoneal fibrosis and IgG4-related disease. Role of IgG4 subclass levels in diagnostics and treatment outcome. Pg 245, *Abstract boek 26e NIV dagen 2014*. ISBN 978-90-8523-153-0.

**van de Bilt F**, van der Meijden W, Hendriksz TR, van Bommel EFH. Outcome of idiopathic retroperitoneal fibrosis in patients treated with corticosteroid or tamoxifen monotherapy. Pg 167, *Abstract boek 26e NIV dagen 2014*. ISBN 978-90-8523-153-0.

van der Kroon DH, van Guldener CJ, **van Bommel EFH**, de Ridder JMM. Written feedback after mini-CEX encounter: the impact of feedback seeking behaviour and direct observation on the perceived instructiveness of feedback. *Abstractboek AMEE Congres 2014*.

van der Kroon DH, van Guldener CJ, **van Bommel EFH**, de Ridder JMM. Schriftelijke feedback bij KPB's: de invloed van eigen initiatief en directe observatie op de kwaliteit van feedback. *Abstractboek NVMO congres 2014*.

Oral presentation European Dialysis and Transplantation Congress (EDTA)  
HISTOLOGICAL FINDINGS AND CLINICAL COURSE IN POST-TRANSPLANTATION AND CLASSICAL EPS: A EUROPEAN MULTICENTER STUDY Joerg Latus, Sayed M. Habib, Daniel Kitterer, **Mario Korte**, Christoph Ulmer, Peter Fritz, Simon Davies, Mark Lambie, M. Dominik Alscher, Michiel Betjes, Stephan Segerer and Niko Braun. *Nephrol. Dial. Transplant.* (2014) 29 (suppl 3): iii16-iii18.

Oral presentation Nederlandse Nefrologie dagen, Veldhoven 2014  
DE INVLOED VAN LEEFTIJD EN VERANDERINGEN IN DE TIJD OP DE PRE-OPERATIEVE  
KWALITEIT VAN BLOEDVATEN VOOR DE AANLEG VAN ARTERIOVENEUZE FISTELS.  
P.J. de Jong, J.A.M. Avontuur, D.Rizopoulos, **M.R. Korte**.

"Macrocytic anemie in patients with newly diagnosed anemia" K. Stouten, J. Riedl, **M-D. Levin** 8<sup>th</sup> Dutch Hematology Congress

"Realtion of the quotient transferrin / log(ferritin) and bone marrow iron content" J. Baan, R. Castel, J. Droogendijk, P. Sonneveld, J. Riedl, P. Berendes, **M-D. Levin** 8<sup>th</sup> Dutch Hematology Congress

"Factors influencing diagnosis and prognosis in patients presenting with severe anaemia in an emergency ward" C. van de Ree-Pellikaan, **M-D. Levin** 8<sup>th</sup> Dutch Hematology Congress

"Prehospital antibiotics against sepsis" M. Willeboer, E. Oskam, **M-D Levin**. 15<sup>th</sup> International Conference on Emergency Medicine.

Meet the expert session: "multiple myeloom" **M-D Levin**, N.W.C.J. van der Donk. 26<sup>ste</sup> Internistendagen, Maastricht

Presentatie "Macrocytic anaemia in patients with newly diagnosed anaemia: factors influencing diagnosis and prognosis" **M-D. Levin**, K. Stouten, P. Sonneveld, 26<sup>ste</sup> Internistendagen, Maastricht

Abstract "Relation of the quotient transferrin / log (ferritin) and bone marrow iron content" J. Baan, R. Castel, J. Droogendijk, P. Sonneveld, J. Riedl, P. Berendes, **M-D Levin** 26<sup>ste</sup> Internistendagen, Maastricht

Abstract "Adherence to guidelines in patients with newly discovered iron deficiency anemia" A. Schop, K. Stouten, **M-D Levin** 26<sup>ste</sup> Internistendagen, Maastricht

Poster "Diagnosis of Anaemia in Patients Presenting to the General Practitioner: Causes and Survival" Karlijn Stouten, Jurgen A Riedl, Pieter Sonneveld and **Mark-David Levin**. 19<sup>th</sup> Congress of the European Hematology Association, Milaan

Presentatie "Randomized Phase III Trial in Non-Transplant Eligible Patients with Newly Diagnosed Symptomatic Multiple Myeloma Comparing Melphalan-Prednisone-Thalidomide Followed By Thalidomide Maintenance (MPT-T) Versus Melphalan-Prednisone-Lenalidomide Followed By Maintenance with Lenalidomide (MPR-R); A Joint Study of the Dutch-Belgian Cooperative Trial Group for Hematology Oncology (HOVON) and the Nordic Myeloma Study Group (NMSG)" Sonja Zweegman, Bronno van der Holt, Ulf-Henrik Mellqvist, Morten Salomo, Gerard M.J. Bos, **Mark-David Levin**, Heleen A Visser-Wisselaar, Markus Hansson, Annette WG van der Velden, Wendy Deenik, Astrid Gruber, Juleon LLM Coenen, Torben Plesner, Saskia K Klein, Bea Tanis, Damian L Szatkowski, Rolf Brouwer, Matthijs Westerman, M (Rineke) BL Leys, Niels W.C.J. van de Donk, Einar Haukås, Klaas van der Hem, MF Durian, E (Vera) JM Mattijssen, Harm AM Sinnige, Marian JPL Stevens-Kroef, Pieter Sonneveld, and Anders Waage. 56<sup>th</sup> ASH, San Francisco

Presentatie "Phase I/II Trial of Weekly Escalated Dose Bortezomib Combined with Lenalidomide and Dexamethasone in Patients in First Relapse or Primary Refractory Disease after First Line Therapy for Multiple Myeloma" Annemiek Broijl, Marie José Kersten, Wendim Ghidey Alemayehu, **Mark-David Levin**, Okke de Weerd, Edo Vellenga, Ellen Meijer, Shulamiet Wittebol, Rosita Ghiraw-Visser, Marian Stevens-Kroef, Berna Beverloo, Gerard M.J. Bos, Pierre W. Wijermans, Henk Lokhorst, and Pieter Sonneveld. 56th ASH, San Francisco

Presentatie "Ofatumumab (OFA) Maintenance Prolongs PFS in Relapsed CLL: Prolong Study Interim Analysis RESULTS" Marinus H.J. van Oers, Kazimierz Kuliczkowski, Lukas Smolej, Mario Petrini, Fritz Offner, Sebastian Grosicki, **Mark-David Levin**, Ira Gupta, Jennifer Phillips, Vanessa Williams, Steen Lisby and Christian Geisler. 56<sup>th</sup> ASH, San Francisco

Poster "Diagnosis of Anaemia in Patients Presenting to the General Practitioner: Causes and Survival" Karlijn Stouten, Jurgen A Riedl, Pieter Sonneveld and **Mark-David Levin**. 56<sup>th</sup> ASH, San Francisco

Poster "Presence of bacterial infection and duration of antibiotic therapy in patients with standardized sepsis detection in the Emergency Department" Tanca C. Minderhoud, Carolina Spruyt, Miranda Lomax, Sawadi Huisman, Stephanie C.E. Schuit, **Mark-David Levin**. International Sepsis Forum, Parijs.

Orale presentatie op de Nederlandse nefrologiedagen en is een poster presentatie op het world transplant congres juli 2014. Onderzoek:

Home-based group education on renal replacement therapy for patiënts with end-stage renal disease: a multi-center randomized controlled trial, Massey EK, **Smak Gregoor PJH**, Nette R, Van den Dorpel MA, van Kooij A, MGH Betjes, Zietse R, Zuidema WC, R. Timman, Busschbach JJ, Weimar W

# Kindergeneeskunde

## Boek of hoofdstuk in boek

Peri-anale problematiek.

- **Theuns-Valks SDM**, Sloots CEJ.

Hoofdstuk in ' Werkboek kinder-MDL'

## Voordrachten en posters

"Congenitale Factor VII deficiëntie als oorzaak voor persisterend vaginaal bloedverlies.

Renske J. Kuppens, **Kathleen M. Welborn**, Jurgen A. Riedl, Sabina Rombout, Annemieke J.

Willemsze, **dr. Theo C.J. Sas**, Marjon H. Cnossen 01-06-2014. Wetenschapsdag in het ASz.

Poster presentatie.

Het optimaal reguleren van de bloedglucose waarden na het eten van vette maaltijden bij kinderen met diabetes mellitus (DM) type 1 met pomptherapie.

T. Berghuis, S. van Gils, J. de Jongh, **dr. T.C.J. Sas** 01-06-2014. Wetenschapsdag in het ASz.

Poster presentatie

Ara h 2 als een diagnosticum voor pinda allergie bij kinderen in het ASz.

Mirjam Schots (Anios kindergeneeskunde), **Amerik de Mol**, **Yvonne Roosen**, Eric Vermeer,

**Wilma Vriesman** 19-06-2014. Wetenschapsdag ASz

Buccal epithelial cell chemokine release as a biomarker for clinical response to therapy.

Winter D.A., Menckeberg C.L., Raatgeep H.C., Ruitter L.F. de, Bakker C, Simons-Oosterhuis Y,

Ridder L. de, Hulst J.M., Koning B.A.E. de, **Theuns-Valks S.D.M.**, Veenbergen S.,

Escher J.C., Samson J.N. 10 t/m 13-09-2014. Poster presentation for the 3rd PIBD symposium. Rotterdam, the Netherlands.

Stability conditions in estradiol matrix patches; in vitro studies for application in pediatrics.

Carina Ankarberg-Lindgren and **Theo Sas**, on behalf of ESPE Turner syndrome working

group. 18 t/m 20-09-2014. ESPE Dublin.

Specific immunoglobulin E to Ara H2 as predictor for peanut allergy in children in a general Dutch hospital.

Schots, Mirjam; **C. de Mol**, **Amerik dr.**; **M. Roosen**, Yvonne; Vermeer, Henricus J.;

**Vriesman, Wilma** 10-10-2014. Poster presentatie FAAM te Dublin.

Synacthen tests in neonates after maternal corticosteroid use.

P.M. Snijder, C.A.M. van Wijk, M.G.A. Baartmans, **T.C.J. Sas**, J. van der Heyden,

E.L.T. van den Akker, A.E. Brandsma. 06-11-2014. NVK Poster en SLAM presentatie

Specific immunoglobulin e to ara h 2 as predictor for peanut allergy in children in a general dutch hospital. **Mirjam Schots**, anios kindergeneeskunde 06-11-2014. Slamsessie NVK.

Oral presentation op internationaal symposium: "GH treatment decisions based on prediction: How relevant?" **Dr. T.C.J. Sas** 13-06-2014. 4rd Meeting of the NER Paediatric Group, Brussel, België.

Presentatie/workshop "Implementatie Suikerplein, een beveiligde online polikliniek"  
Sandra van Gils en **Theo Sas** samen met K. Noordam en Tessa Arts - KDCN-symposium  
'Zorg voor kinderen met diabetes, een kleurrijk palet!' 7 oktober 2014. Canisius Wilhelminus  
Ziekenhuis, Nijmegen

GH behandeling en voorspellingsmethoden **Dr. T.C.J. Sas** 20-06-2014. Oral presentation  
op de vergadering van de Adviesgroep GH van de NVK., Utrecht.

Specific immunoglobulin E to Ara H2 as predictor for peanut allergy in children in a general  
Dutch hospital. Schots, Mirjam; C. de Mol, **Amerik;M., Roosen, Yvonne**; Vermeer, Henricus  
J.; **Vriesman, Wilma** 18-10-2014. Mondelinge presentatie EAPS te Barcelona.

# Klinische fysica

## Posters

Coaching reduced the radiation dose of pain physicians by half during interventional procedures  
**Slegers AS, Gultuna I, Aukes JA, van Gorp EEJA, Blommers FMN, Niehof SP, Bosman J**  
RSNA 100th Scientific Assembly and Annual Meeting

Dose Optimization for Personnel during Interventional Procedures  
**Slegers AS, Leung KYE**  
RSNA, Chicago, december 2014.  
*Received Certificate of Merit.*

# Leerhuis

## Boek of hoofdstuk in boek

Students' and residents' contribution to a safe educational environment in a Tertiary Medical Teaching Hospital: A description of their participation in a System of Educational Quality Management (SEQM).

### Van de Ridder JMM.

In: Nair S, Miller S, Mertova P, (eds), „Enhancing Learning and Teaching through Student Feedback in the Medical and Health Sciences.  
Cambridge, Woodhead Publishing, 2014.  
ISBN nummer: 978843347521

## Voordrachten

Barrières in het feedback proces.

### JMM van de Ridder

Workshop presented at Modernisering Medische Vervolgopleiding Conference. KNMG, Nieuwegein, the Netherlands, December 10, 2014.

Schriftelijke feedback bij KPB's: de invloed van eigen initiatief en directe observatie op de kwaliteit van feedback.

Kroon DH van der, Guldener C van, Bommel EFH van, **Ridder JMM van de**.

Paper presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

Percepties over luistervaardigheden, vertrouwen in eigen kunnen en geven van feedback: hoe vergaat dat chirurgen?

Molendijk MJW, Oostenbroek RJ, Huiskens J, Loenhout R van, Plaisier PW, **Ridder JMM van de**.

Paper presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

Non-verbaal en verbaal gedrag van lerenden in feedbackdialogen.

**Ridder JMM van de**, Hoek B van.

Paper presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014. (Awarded with prize for best paper)

Op welke wijze kan de arts-assistentenvereniging smeerolie zijn binnen de COC om de kwaliteit van de eigen opleiding te verbeteren?

AAV Arts-Assistentenvereniging, Boer DP, Hagens RPA, Hoekstra LT, Schoenmakers R, **Ridder JMM van de**, Oostenbroek RJ.

Round table session presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.



Kwaliteitszorg in de coschappen: implementatie van de Plan-Do-Check-Act-Cyclus.

**Ridder JMM van de**, Bischoff A, Swarte-Houbolt N, Klaren A, Oostenbroek RJ  
Paper presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

What is the relationship between feedback preference and self-efficacy in communication tasks?

Grosfeld FJM, Huiden E, **Ridder JMM van de**.

Paper presented at the European Association for Health Care, International Conference on Health Care 2014 Amsterdam, The Netherlands, September 28 – October 1, 2014.

Seeking feedback: How to change a passive listener into an active learner?

**Ridder JMM van de**, Krajic Kachur E, Blatt B, Verhoeven B.

Pre-conference Workshop presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 29, 2014.

Developing Readiness for Residency programs: Optimizing Student Preparation for Medical Practice During the Last Year of Medical School.

Lypson M, McGaghie WC, **Ridder JMM van de**.

Pre-conference Workshop presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 29, 2014.

Learners' verbal and non-verbal behaviour varies in feedback conditions.

**Ridder JMM van de**, Hoek B van de.

Paper presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 30th - September 3rd, 2014.

Young medical educators' workshop: Fostering your career in medical education.

**Ridder JMM van de**, Huwendiek, Mennin S, Workshop presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 30th - September 3rd, 2014.

Is there a relationship between surgeon's self-efficacy, listening skills and self-reported feedback skills?

Molendijk M, Oostenbroek R, Plaisier P, **Ridder JMM van de**.

Paper presented at the 16th Ottawa Conference on Transforming Healthcare through Excellence in Assessment and Evaluation, Ottawa, Canada, April 25-29, 2014.

Implicit and explicit communication of feedback affects students' retention of the feedback message.

**Ridder JMM van de**, Meeteren J van, Unen EJ van.

Paper presented at the 16th Ottawa Conference on Transforming Healthcare through Excellence in Assessment and Evaluation, Ottawa, Canada, April 25-29, 2014.

Receiving feedback: stimulating feedback seeking within the department culture.

**Ridder JMM van de**, Capello C, Krajic Kachur E. Workshop held at the 16th Ottawa Conference on Transforming Healthcare through Excellence in Assessment and Evaluation, Ottawa, Canada, April 25-29, 2014.

## Posters

Competentie gericht beoordelen in de verpleegkundige beroepspraktijk.

**Reedeker-van Doorn AF**, Ridder JMM van de, Poll E van de.

Poster presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

Portfolio-training Gynaecologie in de OOR-ZWN.

Kate-Booij MJ ten, Kooi GS, Blok G, Nieuwenhuyzen-de Boer G, Oostwaard M van, Speksnijder L, **Ridder JMM van de**.

Poster presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

Interdisciplinair leren aan de hand van praktijkcasuïstiek.

Dijk N van, Norbart A, **Ridder JMM van de**, Hols-Elders WPM.

Poster presented at the Nederlandse Vereniging voor Medisch Onderwijs Congres, Egmond aan Zee, the Netherlands, November 6-7, 2014.

How to involve clerks and residents in a System of Educational Quality Management (SEQM).

Hendriksz T, Oostenbroek R, Residents' Association, Verheijen F, **Ridder JMM van de**.

Poster presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 30th - September 3rd, 2014.

Is there a relationship between surgeons' self-efficacy, listening skills and self-reported feedback skills?

Molendijk M, Lamme B, Plaisier P, Oostenbroek R, **Ridder JMM van de**.

Poster presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 30th - September 3rd, 2014.

Quality management of residency training programs through continuous evaluation and follow up: Experiences and achievements after four years in a teaching hospital in the Netherlands.

Oostenbroek R, Boerebach B, Lombarts K, **Ridder JMM van de**.

Poster presented at the Association for Medical Education in Europe 2014 Conference, Milan, Italy, August 30th - September 3rd, 2014.

Consequences of implementation of an internal quality cycle in medical postgraduate training.

Oostenbroek R, **Ridder JMM van de**.

Poster presented at the 16th Ottawa Conference on Transforming Healthcare through Excellence in Assessment and Evaluation, Ottawa, Canada, April 25-29, 2014.

## Invited lectures

**Ridder JMM van de**. Review on feedback in Medical Education. Kolloquien Rund um Lehre und Assessment: Alternative Unterrichtsformen. Institut für Medizinische Lehre, Universität Bern, Bern, Switzerland, November 10, 2014

**Ridder JMM van de**. Receiving feedback: Stimulating feedback seeking within the departmental culture. Brown bag lunch, Department of Learning Health Sciences, University of Michigan Medical School, Ann Arbor (MI), USA, July 2, 2014

**Ridder JMM van de.** Feedback research in medical education. Research-meeting, Loyola University Chicago, Stritch School of Medicine, Maywood (IL), USA, June 24, 2014

**Ridder JMM van de.** Overview of feedback research in medical education. Workshop Kommunikative und Soziale Kompetenzen, Gesellschaft für Medizinische Ausbildung, Freiburg, June 12, 2014

**Ridder JMM van de.** Zelfstandigheid: hoe dragen leerdoelen en feedback daaraan bij. [Professionalism of Residents: the contribution of feedback and goal-setting]. "Opleiden in het Albert Schweitzer ziekenhuis, Hoera!", Mini-Symposium Kindergeneeskunde, June 5, 2014

**Ridder JMM van de,** Veenhoven H. De kunst van het geven van feedback. [The art of giving feedback] Bijeenkomst Werkplekleren Actueel, Universitair Medisch Centrum Utrecht, May 15, 2014

# Maag-, darm-, en levergeneeskunde

## Overige publicatie

Maas KS, **van de Vrie W**, Kuizinga MC. Multiple elevated red spots in a woman with nausea, altered stools, and weight loss. Clin Gastroenterol Hepatol. 2014 Jan;12(1):e1.

# Neurologie

## Poster

E. Zock, H. Kerkhoff, R.P. Kleyweg, D. van de Beek. Stroke! Waiting or calling 9-1-1? Factors influencing help seeking behaviour. European Stroke Conference, 23rd Conference, Nice, France.

Cerebrovasc Dis 2014;37: suppl 1 abstract B1859

# Pathologie

## Overige publicaties

### Mammacarcinoom: Kankerzorg in beeld

Januari 2014 © IKNL

dr. S. Siesling, senior onderzoeker, IKNL, dr. M. van der Heiden-van der Loo, onderzoeker, IKNL

prof. dr. V.C.G. Tjan-Heijnen, medisch-oncoloog, Maastricht UMC+ , prof. dr. C.J.H. van de Velde, chirurg, LUMC, dr. J.H. Maduro, radiotherapeut, UMCG, dr. **P.J. Westenend**, PAL Dordrecht

[https://www.iknl.nl/docs/default-source/KIB-rapportages/portfolio\\_kib\\_mammacarcinoom0F39D7A20D6F](https://www.iknl.nl/docs/default-source/KIB-rapportages/portfolio_kib_mammacarcinoom0F39D7A20D6F)

## Voordrachten en posters

Non primary breast malignancies: A single institution's experience of a diagnostic challenge.

van Gelder, L.; Buisman, F.; Menke-Pluymers, M.B.E.; Bisschops, R.H.C.; Plaisier, P.W.;

**Westenend, P.J.**; Eur J Cancer 2014;50 suppl 2: S65

The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma. van Gelder, L.; Gerbrands, K.; Menke-Pluymers, M.B.E.;

**Westenend, P.J.**; Plaisier, P.W.; Bisschops, R.H.C.; Eur J Cancer 2014;50 suppl 2: S68

Risk of contralateral breast cancer in relation to nodal status of the primary tumour. van Bommel, A.C.M.; van der Heiden- van der Loo, M.; **Westenend, P.J.**; Sonke, G.S.; van Dalen, T. Eur J Cancer 2014;50 suppl 2: S73

Prophylactic nipple-sparing mastectomy leaves more terminal duct lobular units in situ as compared to skin-sparing mastectomy. van Verschuer, V.M.T.; van Deurzen, C.H.M.;

**Westenend, P.J.**; Rothbarth, J.; Verhoef, C.; Luiten, E.J.T.; Koppert, L.B.; Menke-Pluymers, M.B.E.; Eur J Cancer 2014;50 suppl 2: S149

Quality improvement in surgical breast cancer care: A decrease in positive surgical margins after first breast conserving surgery. Van der Heiden-van der Loo, M.; Van Bommel, A.C.M.;

**Westenend, P.J.**; Siesling, S.; Wouters, M.W.J.M.; Rutgers, E.J.T.; Van Dalen, T; Eur J Cancer 2014;50 suppl 2: S152

Breast cancer pathology differences between hospitals in The Netherlands -

RESULTS from the NABON Breast Cancer Audit van Bommel, A.C.M.;

van der Heiden-van der Loo, M.; Siesling, S.; van Dalen, T.; Tjan - Heijnen, V.C.G.;

**Westenend, P.J.** Eur J Cancer 2014;50 suppl 2: S198

7T Breast MR Imaging for Characterization of Breast Cancer using One-stop-shop Dynamic Contrast Enhancement, Diffusion-weighted Imaging, and Phosphorus MR Spectroscopy.

A.M.Th. Schmitz, W.B. Veldhuis, M.B.E. Menke-Pluymers, W.J.M. van der Kemp,

T.A. van der Velden, M.C.J.M. Kock, **P.J. Westenend**, D.W.J. Klomp, K.G.A. Gilhuijs RSNA

The NABON breast cancer audit; quality improvement in three years' time  
van Bommel AC, Baas-Vrancken Peeters M-JT, van der Heiden - van der Loo M, van Dalen T,  
Rutgers EJ, Wouters MW, Lobbes MB, Pijnappel RM, Mureau MA, **Westenend PJ**, de Vries B,  
Smorenburg CH, Jager A, Maduro JH, Struikmans H, Richel C, Schrieks M, Schepens M,  
Siesling S, Tjan-Heijnen VC  
San Antonio Breast Cancer Conference 2014

Multidisciplinary breast cancer care registry and quality control system in the Netherlands:  
The NABON breast cancer audit  
Tjan-Heijnen VC, van Bommel AC, van der Heiden-van der Loo M, **Westenend P**, de Vries B,  
Smorenburg CH, Jager A, Lobbes MB, Pijnappel RM, Maduro JH, Struikmans H, Mureau MA,  
Schrieks M, Richel C, Schepens M, van Dalen T, Wouters MW, Vrancken Peeters M-JT,  
Rutgers EJ, Siesling S.  
San Antonio Breast Cancer Conference 2014

# Psychiatrie

## Overige publicaties

**M.Th.Derksen**, M.Vreeling, I.Tchetverikov. *High frequency of adult ADHD among fibromyalgia patients*. Clinical and Experimental Rheumatology On line. Aug 2014.

Margreet Verboom en **Marees Derksen**. *Behandeling van volwassenen met ADHD: een nieuwe, succesvolle behandeling met beeldende therapie*. Tijdschrift voor vaktherapie 2013/2014 jaargang 9,11-1

## Voordrachten

**Marees Derksen** en Cindey Syling. *Kwetsbare zwangeren in het ASz*. Presentatie op het Albert Event, nascholing Huisartsen, 15-1-2014, Albert Schweitzer Ziekenhuis, Dordrecht. Geaccrediteerd.

**Marees Derksen**. *The effects of grouptherapy for adults with ADHD: a multicenter study*. Wetenschapsdag Albert Schweitzer ziekenhuis Dordrecht, juni 2014. Geaccrediteerd.

## Posters

**Marees Derksen**. *The effects of grouptherapy for adults with ADHD: a multicenter study*. Voorjaarscongres van de Nederlandse Vereniging voor Psychiatrie, 9,10 en 11 april 2014. Geaccrediteerd door de NVvP.

**Marees Derksen**, Menno Vreeling en Ilja Tchetverikov. *High frequency of adult ADHD among fibromyalgia patients*. Voorjaarscongres van de Nederlandse Vereniging voor Psychiatrie, 9,10 en 11 april 2014. Geaccrediteerd door de NVvP.



# Radiologie

## Overige publicaties en collaborations

Statin therapy is associated with improved survival after endovascular and open aneurysm repair.  
de Bruin JL, Baas AF, Heymans MW, Buimer MG, Prinssen M, Grobbee DE, Blankensteijn JD;  
DREAM Study Group (**Hendriksz TR**).  
*J Vasc Surg.* 2014; 59(1): 39-44

Letter to the editor: Gezien - Radioloog mede-auteur bij publicaties met radiologisch  
beelden. **Kock MC**. B.579-13. Medisch Contact. 2014

Technical and radiological image quality comparison of different liquid crystal displays for  
radiology

**Dams FE**, Leung KY, **van der Valk PH**, **Kock MC**, Bosman J, Niehof SP  
*Med Devices (Auckl)* 2014; 7; 371 - 377

## Voordrachten

Magnetic resonance imaging findings after lateral ankle trauma in injured and  
contralateral ankles

**Van Putte-Katier**, E. Oei  
European Congress of Radiology Wenen, maart 2014

Non-diagnostic RESULTS of fine needle aspiration cytology of thyroid nodules

**S. Jacobs**  
European Congress of Radiology Wenen, maart 2014

Klinische waarde van verbeterde detectie door digitale borst tomosynthese en het gesynthe-  
tiseerde 2D mammogram bij borstkanker

**E. van Dijk**  
Nederlandse vereniging voor Radiologie, september 2014

Non-diagnostic RESULTS of fine needle Aspiration Cytology of Thyroid nodules

**S. Jacobs**  
Nederlandse vereniging voor Radiologie, september 2014

Wat is een goed radiologisch verslag? Overzicht van de richtlijnen

**S. Jacobs**  
Nederlandse vereniging voor Radiologie, september 2014

Leveradenomen: beeldvorming en beleid

**T. Meulman**, B. Bisschops  
Nederlandse vereniging voor Radiologie, september 2014

Digital chest X-ray in diagnosing congestive heart failure: what is the evidence? Wetenschapsdag 2014 ASz  
**D. Goei** (spreker), P. Visser, I.M. Koster, F. Herfkens, M.J. Kofflard, M.C.J.M. Kock

### Posters

The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma  
Van Gelder, Gerbrands, **Bisschops**  
9th European Breast Cancer Conference Glasgow, Maart 2014

Non primary breast malignancies: a single's institution's experience of a diagnostic challenge  
**Bisschops**, Van Gelder  
9th European Breast Cancer Conference Glasgow, Maart 2014

The influence of preoperative MRI on the surgical management and outcome in patients with invasive lobular carcinoma  
Van Gelder, Gerbrands, **Bisschops**  
Wetenschapsdag ASZ, juni 2014

Verpleegkundig specialist en beeldvorming.  
**J. Bakker**  
Landelijk symposium verpleegkundig specialist, mei 2014

Non primary breast malignancies: A single institution's experience of a diagnostic challenge  
L. van Gelder, F. Buisman, M.B.E. Menke-Pluymers, **R.H.C. Bisschops**, P.W. Plaisier, P.J. Westenend

# Spoedeisende hulp geneeskunde

## Voordrachten

Prehospital antibiotics against sepsis: a pilot study in the Netherlands

**Willeboer ML, Oskam E**

ICEM (International Congress of Emergency Medicine), HongKong, Juli 2014

Geaccrediteerd door: o.a.Nederlandse Vereniging voor Spoedeisende Hulp Artsen (NVSHA)

Adverse events of S-ketamine and Propofol for PSA in a Dutch ED

**Esteve Cuevas LM, Tjon Kon Sang PJG, van Hooft MAA**

EuSEM (European Society of Emergency Medicine), Amsterdam, September 2014

Geaccrediteerd door: o.a.Nederlandse Vereniging voor Spoedeisende Hulp Artsen (NVSHA)

ED Sepsis Care: should we start before we begin?

**Willeboer ML, Oskam E**

EuSEM (European Society of Emergency Medicine), Amsterdam, September 2014

Geaccrediteerd door: o.a.Nederlandse Vereniging voor Spoedeisende Hulp Artsen (NVSHA)

## Posters

A strange cardiac murmur

**Spruijt C, Hagens R**

EuSEM (European Society of Emergency Medicine), Amsterdam, September 2014

Geaccrediteerd door: o.a.Nederlandse Vereniging voor Spoedeisende Hulp Artsen (NVSHA)

# Ziekenhuisapothek

## Voordrachten en lezingen

"EVS: update"

**E.M. de Vogel**

PUOZ-cursus "EVS – stand van zaken", april 2014

Geaccrediteerd door: NVZA

"TDM versus Farmacogenetica Deel I en II"

**T.A.G. Tijssen**

Geneesmiddelenbespreking GGz Yulius, mei 2014

Geaccrediteerd door: NVVP en NVZA.

"Farmacokinetiek en (farmaco)genetica"

**M.M. Beex-Oosterhuis**

Geneesmiddelenbespreking GGz Yulius, mei 2014

Geaccrediteerd door: NVVP en NVZA

"Genotypering in het ASz - Is it Magic?"

**M.M. Beex-Oosterhuis**

Geneesmiddelenbespreking GGz Yulius, mei 2014

Geaccrediteerd door: NVVP en NVZA

"Bewakingssystematiek: praktische invoering klinische beslisregel"

**E.M. de Vogel**

PUOZ-cursus "Topics in nephrology", oktober 2014

Geaccrediteerd door: NVZA

"Invloed verminderde nierfunctie en nierfunctievervangende therapie op dosering geneesmiddelen."

**T.A.G. Tijssen**

PUOZ-cursus "Topics in nephrology", oktober 2014

Geaccrediteerd door: NVZA

## Posters

Good practice initiative: periodic quality monitoring of medication surveillance

**M.M. Beex-Oosterhuis, E.M. de Vogel**

EAHP Congres, Barcelona, maart 2014

Een kosten- en batenanalyse van medicatiebeoordeling bij langdurig opgenomen chronisch psychiatrische patiënten. P.E. Graveland, **M.M. Beex-Oosterhuis**, A. Gosker-Venis, A.R. Van Gool  
Voorjaarscongres NVVP, Maastricht, april 2014

# Promoties ASz 2014

Promotie van EG Huijskens, aan de Vrije Universiteit, op het onderwerp:

**Clinical microbiologist; the gatekeeper of informative diagnostics.**

Promotoren:

Prof dr JAJW Kluytmans en

prof dr M. Koopmans.

# Verantwoording

De data ten behoeve van het wetenschappelijk jaaroverzicht 2014 zijn verzameld via de leden van de Wetenschapscommissie en via de vakgroepen. Daarnaast is er door de bibliotheek actief gezocht in Google Scholar en PubMed. In het wetenschappelijk jaaroverzicht zijn de publicaties opgenomen die zijn terug te vinden met de affiliatie Albert Schweitzer ziekenhuis in PubMed. Onder 'Overige publicaties' zijn internationale/nationale publicaties opgenomen die niet in PubMed zijn terug te vinden en verschenen zijn in tijdschriften die geen impactfactor hebben. Naast PubMed publicaties zijn wetenschappelijke bijdrages in de vorm van een 'boek of hoofdstuk van een boek' opgenomen.

Voor de genoemde publicaties geldt dat de (co) auteur en tijde van dataverzameling, dataverwerking of opschrijven van de resultaten een aanzienlijk deel van de werkzaamheden moet hebben verricht in het Albert Schweitzer ziekenhuis en daar werkzaam moet zijn (geweest). Het ASz dient dan ook bij de affiliatie vermeld te staan. Indien het artikel van de (co) auteur gepubliceerd wordt tijdens de aanstellingsperiode in het Albert Schweitzer ziekenhuis, maar de feitelijke werkzaamheden reeds onder een andere aanstelling zijn verricht, kunnen de artikelen niet in het Wetenschappelijk Jaaroverzicht van het Albert Schweitzer ziekenhuis worden opgenomen. De digitale publicaties voorafgaand aan de geprinte versie (Epub ahead of print) van 2014 zijn zoveel als mogelijk meegenomen in het jaaroverzicht 2014 als ze nog niet op papier zijn verschenen.

Voor 'voordrachten' en 'posters' geldt dat deze in het wetenschappelijk jaaroverzicht opgenomen worden indien het geaccrediteerde wetenschappelijke symposia, congressen nationaal of internationaal betreft waar een abstract is gepubliceerd. Hierbij geldt dat de (co) auteur ten tijde van de voordracht werkzaam moet zijn (geweest) in het Albert Schweitzer ziekenhuis. Het wetenschappelijk jaaroverzicht is opgesteld volgens de regels voor biomedische tijdschriften, de Vancouverregels.

# Colofon

Dit wetenschappelijk jaarverslag van het Albert Schweitzer ziekenhuis wordt uitgegeven door het Leerhuis. De redactie is Rianne van Hof en Moniek Kuipers-Freijssen van de bibliotheek zeer erkentelijk om de Pubmed en overige publicaties te verzamelen en waar nodig het rapport te corrigeren.

**Uitgave:** Wetenschappelijk jaarverslag 2014

## **Redactie**

Dr. J.L. (Joke) Bosch (klinisch epidemioloog, wetenschapscoördinator)

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E.Y. (Esther) de Kruijf (secretariaat wetenschapscommissie)

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## **Fotografie**

Frederike Roozen - Sliker

## **Foto voorkant**

Vakgroep Klinische Fysica. Op de afbeelding een Jaszczak fantoom op de nieuwe Spect-CT scanner van het ASz.

## **Vormgeving**

Elan Strategie en Creatie, Rijswijk

## **Productie en contact**

J.L. Bosch

**Oplage:** digitaal

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WETENSCHAPSCOMMISSIE

LEERHUIS

Albert Schweitzer  
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