

## Henry Ford Health System Publication List - June 2010

*This is a bibliography of journal articles published by Henry Ford Health System personnel. A search was compiled in PubMed and Web of Science during the month of June 2010, and then imported into EndNote for formatting.*

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*You can access this page at <http://www.henryfordconnect.com/sladen.cfm?id=436>.*

### Allergy & Immunology

Misiak, R. T., G. Wegienka and E. Zoratti (2010). "Are Specific Allergen Sensitivities Inherited?" Curr Allergy Asthma Rep **Epub Ahead of Print**. [PDF Full-Text](#)

Department of Internal Medicine, Division of Allergy and Clinical Immunology, Henry Ford Health System, One Ford Place 4B, Detroit, MI, 48202, USA, [rmisiak1@hfhs.org](mailto:rmisiak1@hfhs.org).

A family history of an allergic condition is a well-accepted risk factor for the development of an allergic condition in an individual, particularly for allergic disorders such as asthma, eczema, and allergic rhinitis. However, the question of whether specific allergen sensitization is inherited requires a complicated answer, as environmental exposure plays an important role in the development of allergen-specific IgE. This article summarizes the findings of recent studies in the literature regarding what is known about the inheritance of specific allergens. Overall, properly collected and analyzed data appear to both support and refute the hypothesis that specific allergen sensitization is inherited, even when attempting to account for the complexities of varying study methodologies and the evaluation of diverse populations and communities.

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### Allergy & Immunology

Powell, D. and S. Ahmed (2010). "Soccer Shin Guard Reactions: Allergic and Irritant Reactions." Dermatitis **21**(3): 162-166. [Article Request Form](#)

[Powell, Douglas] Univ Utah, Dept Dermatol, Salt Lake City, UT 84132 USA. Henry Ford Hosp, Dept Allergy & Immunol, Detroit, MI 48202 USA.

Powell, D, Univ Utah, Dept Dermatol, 30 N 1900 E 4B454 SOM, Salt Lake City, UT 84132 USA. [Doug.Powell@hsc.utah.edu](mailto:Doug.Powell@hsc.utah.edu)

In spite of the worldwide popularity of soccer among youth and the common requirement of the use of protective shin guards, reports of allergy to shin guards is sparse. This is surprising in light of the fact that this equipment is often made of materials that are reported to cause allergies, and that friction and moisture from the use of these shin guards during the sport would seem to predispose soccer players to the development of an allergic response. We present eight patients that presented for evaluation of dermatitis under their shin guards some of which had allergy to their shin guards and some of which were diagnosed as having an irritant reaction.

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Hours  
8:30am-7:30pm M-Th  
8:30am-5:00pm F

## Anesthesiology

Kroll, H. R., V. Arora and D. Vangura (2010). "Coronary artery spasm occurring in the setting of the oculocardiac reflex." J Anesth **EPub Ahead of Print**. [PDF Full-Text](#)

Department of Anesthesiology, Henry Ford Hospital, 2799 W Grand Blvd, Detroit, MI, 48202, USA, [hkroll1@hfhs.org](mailto:hkroll1@hfhs.org).

The oculocardiac reflex (OCR) occurs in up to 90% of ophthalmological surgeries. Several preventive and treatment strategies have been described. Coronary artery spasm (CAS) plays an important role in the pathogenesis of variant angina and myocardial infarction. We describe an unusual case of a perioperative myocardial infarction due to CAS that occurred in the setting of the treatment of the OCR. We offer insight aimed at minimizing the deleterious effects of the OCR and its management.

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## Anesthesiology

Nagaraja, T. N., K. Karki, J. R. Ewing, G. W. Divine, J. D. Fenstermacher, C. S. Patlak and R. A. Knight (2010). "The MRI-Measured Arterial Input Function Resulting From a Bolus Injection of Gd-DTPA in a Rat Model of Stroke Slightly Underestimates That of Gd-[C-14]DTPA and Marginally Overestimates the Blood-to-Brain Influx Rate Constant Determined by Patlak Plots." Magnetic Resonance in Medicine **63**(6): 1502-1509. [PDF Full-Text](#)

[Nagaraja, Tavarekere N.; Fenstermacher, Joseph D.] Henry Ford Hosp, Dept Anesthesiol, Detroit, MI 48202 USA. [Karki, Kishor; Ewing, James R.; Knight, Robert A.] Henry Ford Hosp, Dept Neurol, Detroit, MI 48202 USA. [Divine, George W.] Henry Ford Hosp, Dept Biostat & Res Epidemiol, Detroit, MI 48202 USA. [Ewing, James R.; Knight, Robert A.] Oakland Univ, Dept Phys, Rochester, MI USA. [Patlak, Clifford S.] Univ Penn, Dept Neurol, Philadelphia, PA 19104 USA.

Nagaraja, TN, Henry Ford Hosp, Dept Anesthesiol, 2799 W Grand Blvd, Detroit, MI 48202 USA. [annta@neuro.hfh.edu](mailto:annta@neuro.hfh.edu)

The hypothesis that the arterial input function (AIF) of gadolinium-diethylenetriaminepentaacetic acid injected by intravenous bolus and measured by the change in the T-1-relaxation rate ( $\Delta R-1$ ;  $R-1 = 1/T-1$ ) of superior sagittal sinus blood (AIF-I) approximates the AIF of C-14-labeled gadolinium-diethylenetriaminepentaacetic acid measured in arterial blood (reference AIF) was tested in a rat stroke model ( $n = 13$ ). Contrary to the hypothesis, the initial part of the  $\Delta R-1$ -time curve was underestimated, and the area under the normalized curve for AIF-I was about 15% lower than that for the reference AIF. Hypothetical AIFs for gadolinium-diethylenetriaminepentaacetic acid were derived from the reference AIF values and averaged to obtain a cohort-averaged AIF. Influx rate constants ( $K-i$ ) and proton distribution volumes at zero time ( $V-p + V-o$ ) were estimated with Patlak plots of AIF-I, hypothetical AIFs, and cohort-averaged AIFs and tissue  $\Delta R-1$  data. For the regions of interest, the  $K(i)$ s estimated with AIF-I were slightly but not significantly higher than those obtained with hypothetical AIFs and cohort-averaged AIF. In contrast,  $V-p + V-o$  was significantly higher when calculated with AIF-I. Similar estimates of  $K-i$  and  $V-p + V-o$  were obtained with hypothetical AIFs and cohort-averaged AIF. In summary, AIF-I underestimated the reference AIF; this shortcoming had little effect on the  $K-i$  calculated by Patlak plot but produced a significant overestimation of  $V-p + V-o$ . *Magn Reson Med* 63:1502-1509, 2010. (C) 2010 Wiley-Liss, Inc.

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## Behavioral Services

Carey, J., F. Hoodin, T. J. Lynch, K. N. Alschuler, M. Byrd and M. J. Mendelow (2010). "The Long-Term Effect of Adolescent Idiopathic Scoliosis (Ais) on Quality of Life (Qol) in Adults." Annals of Behavioral Medicine **39**: 26-26. [PDF Full-Text](#) (Scroll down to page 26)

[Carey, Jillian; Hoodin, Flora; Alschuler, Kevin N.; Byrd, Michelle] Eastern Michigan Univ, Ypsilanti, MI 48197 USA. [Lynch, Teresa J.] Henry Ford Hlth Syst, Detroit, MI USA. [Mendelow, Michael J.] Providence Hosp St John Hlth, Novi, MI USA. [jcarey6@emich.edu](mailto:jcarey6@emich.edu)

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## Biostatistics & Research Epidemiology

O'Neill, S., C. M. McBride, S. H. Alford and K. A. Kaphingst (2010). "Do Behavioral Risk Factors and Genetic Causal Beliefs Diminish Interest in Seeking Information About Health Habits?" Annals of Behavioral Medicine **39**: 183-183. [PDF Full-Text](#) (Scroll down to page 183)

[O'Neill, Suzanne] Georgetown Univ, Washington, DC 20007 USA. [McBride, Colleen M.; Kaphingst, Kimberly A.] NHGRI, Social & Behav Res Branch, NIH, Bethesda, MD 20892 USA. [Alford, Sharon Hensley] Henry Ford Hlth Syst, Detroit, MI USA. [sco4@georgetown.edu](mailto:sco4@georgetown.edu)

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### **Biostatistics & Research Epidemiology**

Wegienka, G., S. Havstad, K. Bobbitt, K. Woodcroft, C. Cole and C. C. Johnson (2010). "Regulatory T Cells: From Pregnancy to the Postpartum." Reproductive Sciences **17**(3): 297. [Article Request Form](#)

[Wegienka, Ganesa; Havstad, Suzanne; Bobbitt, Kevin; Woodcroft, Kimberley; Cole, Christine; Johnson, Christine Cole] Henry Ford Hosp, Dept Biostat & Res Epidemiol, Detroit, MI 48202 USA.

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### **Bone & Joint Center**

McDonald, C. P., C. C. Bachison, V. Chang, S. W. Bartol and M. J. Bey (2010). "Three-dimensional dynamic in vivo motion of the cervical spine: assessment of measurement accuracy and preliminary findings." Spine Journal **10**(6): 497-504. [Article Request Form](#)

[McDonald, Colin P.; Bey, Michael J.] Henry Ford Hosp, Ctr Bone & Joint, Detroit, MI 48202 USA. [Bachison, Casey C.; Bartol, Stephen W.] Henry Ford Hosp, Dept Orthopaed Surg, Detroit, MI 48202 USA. [Chang, Victor] Henry Ford Hosp, Dept Neurosurg, Detroit, MI 48202 USA.

McDonald, CP, Henry Ford Hosp, Ctr Bone & Joint, 2799 W Grand Blvd,E&R 2015, Detroit, MI 48202 USA. [cmcdona2@hfhs.org](mailto:cmcdona2@hfhs.org)

BACKGROUND CONTEXT: Previous research has quantified cervical spine motion with conventional measurement techniques (eg, cadaveric studies, motion capture systems, and fluoroscopy), but these techniques were not designed to accurately measure three-dimensional (3D) dynamic cervical spine motion under in vivo conditions. PURPOSE: The purposes of this study were to characterize the accuracy of model-based tracking for measuring 3D dynamic cervical spine kinematics and to demonstrate its in vivo application. STUDY DESIGN: Through accuracy assessment and application of technique, in vivo cervical spine motion was measured. METHODS: The accuracy of model-based tracking for measuring cervical spine motion was determined in an in vitro experiment. Tantalum beads were implanted into the vertebrae of an ovine specimen, and biplane X-ray images were acquired as the specimen's neck was manually moved through neck extension and axial neck rotation. The 3D position and orientation of each cervical vertebra were determined from the biplane X-ray images using model-based tracking. For comparison, the position and orientation of each vertebra were also determined by tracking the position of the implanted beads with dynamic radiostereometric analysis. To demonstrate in vivo application of this technique, biplane X-ray images were acquired as a human subject performed two motion tasks: neck extension and axial neck rotation. The positions and orientations of each cervical vertebra were determined with model-based tracking. Cervical spine motion was reported with standard kinematic descriptions of translation and rotation. RESULTS: The in vitro validation demonstrated that model-based tracking is accurate to within +/- 0.6 mm and +/- 0.6 degrees for measuring cervical spine motion. For the in vivo application, there were significant rotations about all three anatomical axes for both the neck extension and axial neck rotation motion tasks. CONCLUSIONS: Model-based tracking is an accurate technique for measuring in vivo, 3D, dynamic cervical spine motion. Preliminary data acquired using this technique are in agreement with previous studies. It is anticipated that this experimental approach will enhance our understanding of cervical spine motion under normal and pathologic conditions. (C) 2010 Elsevier Inc. All rights reserved.

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### **Bone & Joint Center**

Mulieri, P. J., J. O. Holcomb, P. Dunning, M. Pliner, R. K. Bogle, D. Pupello and M. A. Frankle (2010). "Is a formal physical therapy program necessary after total shoulder arthroplasty for osteoarthritis?" Journal of Shoulder and Elbow Surgery **19**(4): 570-579.

[PDF Full-Text](#)

[Mulieri, Philip J.; Frankle, Mark A.] Florida Orthopaed Inst, Shoulder & Elbow Div, Tampa, FL 33637 USA.

[Holcomb, Jason O.] Henry Ford Wyandotte Hosp, Wyandotte, MI USA. [Dunning, Page; Pliner, Michele;

Bogle, R. Kent; Pupello, Derek] Fdn Orthopaed Res & Educ, Tampa, FL USA.

Frankle, MA, Florida Orthopaed Inst, Shoulder & Elbow Div, 13020 N Telecom Pkwy, Tampa, FL 33637 USA.

[frankle@pol.net](mailto:frankle@pol.net)

Hypothesis: A retrospective analysis was conducted of 2 consecutive groups of patients undergoing total shoulder arthroplasty (TSA) for primary osteoarthritis. One group was treated with formal physical therapy (PT), and one group was treated with home-based, physician-guided PT. We hypothesized that patients with a formal postoperative PT protocol would have significantly better postoperative clinical outcomes than patients with no formal PT. Methods: Group A (43 patients) had a standard PT program. Group B (38 patients) had a home-based, physician-guided PT program. Clinical outcomes (preoperatively, 3, 6, and 12 months and most recent follow-up) were analyzed. A minimum sample size of 31 patients gives power to detect a 10-point American Shoulder and Elbow Surgeons (ASES) score ( $\alpha = 0.05$ ,  $\beta = 0.80$ ). Results: ASES and Simple Shoulder Test (SST) scores significantly improved in both groups at all follow-up periods. Forward flexion and abduction were significantly improved in group B at all time points, whereas an initial improvement in forward flexion and abduction in group A was lost at final follow-up. There were no significant differences in final ASES or SST scores between groups at final follow-up. However, forward flexion, abduction, and the Short Form-36 physical component summary in group B were significantly better than group A at final follow-up. No significant improvements in internal rotation or SF-36 mental component summary were seen within or between the groups at final follow-up. Overall, there was no difference in patient satisfaction, with 88% satisfaction in group A and 95% satisfaction in group B ( $\chi^2 = 0.471$ ,  $P = .4924$ ). Conclusions: A home-based, physician-guided therapy program may provide adequate rehabilitation after TSA, allowing for a reduction in cost for the overall procedure.

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## Cardiology

Keteyian, S. J., C. A. Brawner, J. K. Ehrman, R. Ivanhoe, J. P. Boehmer and W. T. Abraham (2010). "Reproducibility of Peak VO<sub>2</sub> and Other Cardiopulmonary Exercise Parameters: Implications for Clinical Trials and Clinical Practice." Chest **Epub Ahead of Print**. [PDF](#)

[Full-Text](#)

Division of Cardiovascular Medicine, Henry Ford Hospital, Detroit, Michigan;

**ABSTRACT BACKGROUND:** Clinical trialists involved in projects aimed at assessing the impact of a device or therapy on exercise capacity must select an end point that can detect a therapy-derived change and do so in a manner that is both sensitive to the change and valid. Using baseline data from the PEERLESS-HF (Prospective Evaluation of Elastic Restraint to LESSen the effects of Heart Failure) trial, we describe the coefficient of variation (CV) for peak oxygen uptake (VO<sub>2</sub>) and other parameters measured during a cardiopulmonary exercise (CPX) test. **METHODS:** Prior to conducting CPX testing, a CPX core laboratory conducted training with testing staff at each site and a standardized quality assurance protocol was completed. During screening, subjects performed two symptom-limited CPX tests (CPX-0 and CPX-1) within 14 days. **RESULTS:** The CV for peak VO<sub>2</sub>, ventilatory efficiency, and ventilatory-derived anaerobic threshold were 5.9%, 4.8%, and 6.8%, respectively. During CPX-0, the percent of subjects with a respiratory exchange ratio (RER) <1.05 that increased their peak VO<sub>2</sub> by  $\geq 6\%$  during CPX-1 was 47%, compared to 12% of subjects also with an RER <1.05 that experienced a decrease in peak VO<sub>2</sub>  $\geq 6\%$ . **CONCLUSIONS:** In a multi-site clinical trial setting we showed that the achieved test-retest reproducibility for peak VO<sub>2</sub> can be acceptable, as evidenced by a CV at 5.9%. Until more data is available to identify patients who may demonstrate greater test-retest variance and to avoid repeat testing in all subjects at baseline, clinical trialists might consider repeating tests when RER <1.05. ClinicalTrials.gov Identifier: NCT00382863.

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## Cardiology

Lillvis, J. H. and D. E. Lanfear (2010). "Progress toward genetic tailoring of heart failure therapy." Curr Opin Mol Ther **12**(3): 294-304. [Article Request Form](#)

Henry Ford Hospital, Heart and Vascular Institute, Section of Advanced Heart Failure and Cardiac Transplantation, 2799 West Grand Boulevard, Detroit, MI 48202, USA.

Heart failure (HF) is a modern epidemic and a heterogeneous disorder with many therapeutic options. While the average response to each individual treatment is favorable, significant interindividual variation exists in the response to HF therapeutics. As a result, the optimal regimen for an individual patient or subgroup of patients is elusive, with current treatment being mainly empirical. Pharmacogenetic customization of HF therapy may provide an important opportunity to improve the treatment of HF. Common genetic variations exist in genes related to most classes of HF drugs, many of which have known functional consequences for or established relationships with drug response. This review summarizes the current understanding of the pharmacogenetics of HF therapeutics, including angiotensin-converting enzyme inhibitors and beta-blockers, and focuses on recent advances and medium-term expectations for the field.

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### **Center for Health Services Research**

Williams, L. K., E. L. Peterson, K. Wells, J. Campbell, M. Wang, V. K. Chowdhry, M. Walsh, R. Enberg, D. E. Lanfear and M. Pladevall (2010). "A cluster-randomized trial to provide clinicians inhaled corticosteroid adherence information for their patients with asthma." J Allergy Clin Immunol **Epub Ahead of Print**. [PDF Full-Text](#)

Center for Health Services Research, Detroit, Mich; Department of Internal Medicine, Detroit, Mich; Department of Biostatistics and Research Epidemiology, Henry Ford Health System, Detroit, Mich.

**BACKGROUND:** Inhaled corticosteroid (ICS) nonadherence is common among patients with asthma; however, interventions to improve adherence have often been complex and not easily applied to large patient populations. **OBJECTIVE:** To assess the effect of supplying patient adherence information to primary care providers. **METHODS:** Patients and providers were members of a health system serving southeast Michigan. Providers (88 intervention; 105 control) and patients (1335 intervention; 1363 control) were randomized together by practice. Patients were age 5 to 56 years, had a diagnosis of asthma, and had existing prescriptions for ICS medication. Adherence was estimated by using prescription and fill data. Unlike clinicians in the control arm, intervention arm providers could view updated ICS adherence information on their patients via electronic prescription software, and further details on patient ICS use could be viewed by selecting that option. The primary outcome was ICS adherence in last 3 months of the study period. **RESULTS:** At the study end for the intention-to-treat analysis, ICS adherence was not different among patients in the intervention arm compared with those in the control arm (21.3% vs 23.3%, respectively;  $P = .553$ ). However, adherence was significantly higher among patients whose clinician elected to view their detailed adherence information (35.7%) compared with both control arm patients ( $P = .026$ ) and intervention arm patients whose provider did not view adherence data ( $P = .002$ ). **CONCLUSIONS:** Overall, providing adherence information to clinicians did not improve ICS use among patients with asthma. However, patient use may improve when clinicians are sufficiently interested in adherence to view the details of this medication use.

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### **Dermatology**

Brooks, C. and E. Nydorf (2010). "Pemphigus foliaceus in an American adolescent female." Journal of the American Academy of Dermatology **62**(3): AB80-AB80. [PDF Full-Text](#)

[Brooks, Crystal; Nydorf, Ethan] Henry Ford Med Ctr, Detroit, MI USA.

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### **Dermatology**

Burnett, C., D. Wright, E. Nydorf and P. Vemulapalli (2010). "Thrombotic nodules secondary to bevacizumab in a patient with glioblastoma multiforme." Journal of the American Academy of Dermatology **62**(3): AB28-AB28. [PDF Full-Text](#)

[Burnett, Christopher; Wright, Dakara; Nydorf, Ethan; Vemulapalli, Pranita] Henry Ford Hosp, Detroit, MI 48202 USA.

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### **Dermatology**

Eide, M. J., R. Krajenta, D. Johnson, J. J. Long, G. Jacobsen, M. M. Asgari, H. W. Lim and C. C. Johnson (2010). "Re: "Identification of Patients with Nonmelanoma Skin Cancer using Health Maintenance Organization Claims Data" - The Authors Reply." American Journal of Epidemiology **172**(1): 124-124. [PDF Full-Text](#)

[Eide, Melody J.; Lim, Henry W.] Henry Ford Hosp, Dept Dermatol, Detroit, MI 48202 USA. [Eide, Melody J.; Krajenta, Richard; Johnson, Dayna; Long, Jordan J.; Jacobsen, Gordon; Johnson, Christine C.] Henry Ford Hosp, Dept Biostat & Res Epidemiol, Detroit, MI 48202 USA. [Asgari, Maryam M.] Kaiser Permanente No Calif, Div Res, Oakland, CA 94612 USA.

Eide, MJ, Henry Ford Hosp, Dept Dermatol, Detroit, MI 48202 USA. [meide1@hfhs.org](mailto:meide1@hfhs.org)

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### **Dermatology**

Elrashidy, D. and H. Kerr (2010). "A woman with widespread neutrophilic dermatoses: A case report." Journal of the American Academy of Dermatology **62**(3): AB30-AB30. [PDF Full-Text](#)

[Elrashidy, Dina; Kerr, Holly] Henry Ford Hosp, Detroit, MI 48202 USA.

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### **Dermatology**

Ghaferi, J. and M. Douglass (2010). "Inflammation of actinic keratoses secondary to systemic chemotherapy." Journal of the American Academy of Dermatology **62**(3): AB93-AB93. [PDF Full-Text](#)

[Ghaferi, Jessica; Douglass, Margaret] Henry Ford Hosp, Detroit, MI 48202 USA.

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### **Dermatology**

Gold, L. S., J. C. Dhuin, J. Tan and J. Jorizzo (2010). "Adapalene 0.1%/benzoyl peroxide 2.5% gel with doxycycline hyclate 100 mg tablets compared to vehicle gel with doxycycline hyclate 100 mg tablets in the treatment of severe acne vulgaris." Journal of the American Academy of Dermatology **62**(3): AB13-AB13. [PDF Full-Text](#)

[Gold, Linda Stein] Henry Ford Hlth Syst, Bloomfield Hills, MI USA. [Dhuin, Jean-Charles] Galderma, Med & Mkt, Sophia Antipolis, France. [Tan, Jerry] Windsor Clin Res, Windsor, ON, Canada. [Jorizzo, Joseph] Wake Forest Univ, Sch Med, Winston Salem, NC 27109 USA.

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### **Dermatology**

Gold, L. S., J. Tan, K. Papp and Y. Poulin (2010). "A pivotal study comparing the efficacy and safety of the adapalene-benzoyl peroxide fixed-dose combination gel with each component and the vehicle in 1668 patients with acne vulgaris." Journal of the American Academy of Dermatology **62**(3): AB16-AB16. [PDF Full-Text](#)

[Gold, Linda Stein] Henry Ford Hlth Syst, Bloomfield Hills, MI USA. [Tan, Jerry] Windsor Clin Res, Windsor, ON, Canada. [Papp, Kim] K Papp Clin Res Waterloo, Waterloo, ON, Canada. [Poulin, Yves] Ctr Rech Dermatol Quebec Metropolitan, Quebec City, PQ, Canada.

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### **Dermatology**

Hoffman, D. and H. Kerr (2010). "Parry-Romberg syndrome." Journal of the American Academy of Dermatology **62**(3): AB43-AB43. [PDF Full-Text](#)

[Hoffman, Daniel; Kerr, Holly] Henry Ford Hlth Syst, Detroit, MI USA.

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### **Dermatology**

Liggett, J. and H. Lim (2010). "Cutaneous metastasis occurring only within an irradiated field." Journal of the American Academy of Dermatology **62**(3): AB93-AB93. [PDF Full-Text](#)

[Liggett, Jessica; Lim, Henry] Henry Ford Hosp, Dept Dermatol, Detroit, MI 48202 USA.

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### **Dermatology**

Medeiros, V. L. and H. W. Lim (2010). "Sunscreens in the management of photodermatoses." Skin Therapy Lett **15**(6): 1-3. [Article Request Form](#)

Department of Dermatology, Henry Ford Hospital, Detroit, MI, USA.

Key to the management of photodermatoses is photoprotection, which includes seeking shade; wearing photoprotective clothing, wide brimmed hats, and sunglasses; and applying sunscreens. The process of selecting the most effective sunscreen depends on identification of the wavelengths of photons that are responsible for inducing the sensitivity reaction, which can be determined through assessment of patient history or by phototesting. Sunscreens with sun protection factor (SPF) >30 that incorporate photostable or photostabilized ultraviolet A (UVA) filters (labeled as 'broad spectrum' in the US) are usually the appropriate choice for adequate photoprotection.

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### **Dermatology**

Rondina, A. and A. Watson (2010). "Verrucous Bowen disease in an African American man." Journal of the American Academy of Dermatology **62**(3): AB105-AB105. [PDF Full-Text](#)

[Rondina, Angela; Watson, Alice] Henry Ford Hlth Syst, Detroit, MI USA.

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### **Dermatology**

Sage, R. and J. Kwon (2010). "Extensive spontaneous keloidosis: A case report." Journal of the American Academy of Dermatology **62**(3): AB32-AB32. [PDF Full-Text](#)

[Sage, Robert; Kwon, Jungho] Henry Ford Hlth Syst, Dept Dermatol, Detroit, MI USA.

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### **Dermatology**

Sage, R. J., M. C. Lopiccio, A. G. Laungani and D. J. Kouba (2010). "Mohs Micrographic Surgery for the Treatment of Cellular Neurothekeoma and Review of Its Use in Surgical Management of Benign Tumors." Dermatol Surg **Epub Ahead of Print**. [PDF Full-Text](#)

Division of Mohs Micrographic Surgery, Department of Dermatology, Henry Ford Health System, Detroit, Michigan.

The authors have indicated no significant interest with commercial supporters.

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### **Dermatology**

Sage, R. J., R. L. Moy, J. Kampp and D. J. Kouba (2010). "Intermediate-Thickness Skin Grafting for Repair of Cutaneous Defects After Mohs Micrographic Surgery." Dermatol Surg **Epub Ahead of Print**. [PDF Full-Text](#)

Division of Mohs Micrographic Surgery, Department of Dermatology, Henry Ford Health System, Detroit, Michigan.

The authors have indicated no significant interest with commercial supporters.

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### **Dermatology**

Scissors, B. and R. C. Gathers (2010). "A case of exogenous ochronosis caused by a triple combination bleaching cream." Journal of the American Academy of Dermatology **62(3)**: AB123-AB123. [PDF Full-Text](#)

[Scissors, Beth; Gathers, Raechele Cochran] Henry Ford Hlth Syst, Detroit, MI USA.

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### **Dermatology**

Stein-Gold, L., D. Chen, F. Cook-Bolden and H. Baldwin (2010). "Efficacy of a once-daily fixed combination clindamycin phosphate (1.2%) and low concentration benzoyl peroxide (2.5%) aqueous gel across a broad patient population with moderate to severe acne." Journal of the American Academy of Dermatology **62(3)**: AB15-AB15. [PDF Full-Text](#)

[Stein-Gold, Linda] Henry Ford Med Ctr, Detroit, MI USA. [Chen, Diana] Dow Pharmaceut, Redwood City, CA USA. [Cook-Bolden, Fran] Dept Dermatol, New York, NY USA. [Baldwin, Hilary] Dept Dermatol, Brooklyn, NY USA.

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### **Dermatology**

Woo, D. and M. Douglass (2010). "Atypical clinical manifestation of acyclovir-resistant HSV in an AIDS patient: Case report and review of the literature." Journal of the American Academy of Dermatology **62(3)**: AB90-AB90. [PDF Full-Text](#)

[Woo, Denise; Douglass, Margaret] Henry Ford Hosp, Detroit, MI 48202 USA.

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### **Dermatology**

Wright, D. R., B. Mahmoud-Abdallah, D. Mehregan and I. Hamzavi (2010). "Clinicopathologic observation of hidradenitis suppurativa after treatment with the long-pulsed Nd:YAG 1064-nm laser." Journal of the American Academy of Dermatology **62(3)**: AB53-AB53. [PDF Full-Text](#)

[Mahmoud-Abdallah, Bassel] Henry Ford Dermatol, Detroit, MI USA. [Mehregan, David] Wayne State Univ, Dearborn, MI USA.

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## **Dermatology**

Xu, L. and H. Kerr (2010). "A case of livedo reticularis from amantadine." Journal of the American Academy of Dermatology **62**(3): AB30-AB30. [PDF Full-Text](#)

[Xu, Lisa; Kerr, Holly] Henry Ford Hosp, Detroit, MI 48202 USA.

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## **Diagnostic Radiology**

Jain, R., S. Ellika, N. L. Lehman, L. Scarpace, L. R. Schultz, J. P. Rock, M. Rosenblum and T. Mikkelsen (2010). "Can permeability measurements add to blood volume measurements in differentiating tumefactive demyelinating lesions from high grade gliomas using perfusion CT?" Journal of Neuro-Oncology **97**(3): 383-388. [PDF Full-Text](#)

[Jain, Rajan; Ellika, Shehanaz] Henry Ford Hlth Syst, Dept Radiol, Div Neuroradiol, Detroit, MI 48202 USA. [Lehman, Norman L.] Henry Ford Hosp, Dept Pathol, Detroit, MI 48202 USA. [Lehman, Norman L.; Scarpace, Lisa; Rock, Jack P.; Rosenblum, Mark; Mikkelsen, Tom] Henry Ford Hosp, Dept Neurosurg, Detroit, MI 48202 USA. [Schultz, Lonni R.] Henry Ford Hosp, Dept Biostat & Res Epidemiol, Detroit, MI 48202 USA. Jain, R, Henry Ford Hlth Syst, Dept Radiol, Div Neuroradiol, 2799 W Grand Blvd, Detroit, MI 48202 USA. [rajanj@rad.hfh.edu](mailto:rajanj@rad.hfh.edu)

Tumefactive demyelinating lesions (TDLs) can mimic a neoplasm on conventional imaging and may necessitate biopsy for diagnosis. The purpose of this study was to differentiate TDLs from high grade gliomas based on physiologic (permeability) and hemodynamic (blood volume) parameters using perfusion CT. Five patients who presented with tumefactive enhancing lesions on initial MRI that mimicked a neoplasm underwent perfusion CT. We compared the perfusion CT parameters of these patients with those of 24 patients with high grade gliomas. TDLs showed lower permeability surface area product (PS) (0.8 +/- 0.2 vs 2.4 +/- 1.4 ml/100 g/min, P-value 0.014) and lower cerebral blood volume (CBV) (1.0 +/- 0.2 vs 2.8 +/- 1.2 ml/100 g, P-value 0.006) as compared to high grade gliomas. TDLs show lower PS and CBV as compared to high grade gliomas, to which they can mimic on conventional MR imaging, due to lack of neoangiogenesis and vascular endothelial proliferation and hence perfusion CT can be used to differentiate the two entities.

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## **Emergency Medicine**

Boehm, K. M. (2010). "Seasonal and avian influenza knowledge base of attending physicians in a community-based hospital: a survey-based study." J Am Osteopath Assoc **110**(5): 285-9. [Article Request Form](#)

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CONTEXT: Influenza remains a serious threat and is the most frequent cause of death from a vaccine-preventable disease. Physicians' understanding of influenza and its management and prevention can potentially reduce the spread of disease in the community. OBJECTIVE: To ascertain physicians' knowledge of the prevention, identification, and treatment of seasonal and avian influenza. METHODS: A 14-question survey regarding seasonal and avian influenza was distributed to emergency physicians at a medical staff meeting in 2005. RESULTS: The survey was given to 360 physicians, of whom 54 (15%) submitted completed surveys. Of the 51 physicians (94%) in favor of vaccines, only 32 (59%) received the influenza vaccine and only 21 (39%) always received the yearly vaccine. Eight physicians (15%) washed their hands before seeing patients, 18 (33%) washed their hands after seeing patients, 21 (39%) washed their hands before and after seeing patients, and 7 (13%) stated they only wash their hands sometimes. Seven (13%) always "alcohol" their stethoscope between patients; 28 (52%) responded "sometimes;" and 4 (7%), "never." When taking patient histories, 31 (58%) stated that they always or sometimes ask about travel history; 15 (28%) stated that they never ask about travel history. Thirty-six respondents (67%) would take oseltamivir phosphate if they had avian influenza. CONCLUSION: This survey-based study reveals that physicians may lack information in the domains of influenza prevention, identification, and management. Emergency physicians must take the lead in the hospital to ensure that we as a profession are aware of emerging pathogens, how to recognize those pathogens and treat infected patients, and how to protect ourselves.

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## Endocrinology & Metabolism

Bhan, A., A. D. Rao and D. S. Rao (2010). "Osteomalacia as a result of vitamin D deficiency." Endocrinol Metab Clin North Am **39**(2): 321-31. [PDF Full-Text](#)

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Osteomalacia is an end-stage bone disease of chronic and severe vitamin D or phosphate depletion of any cause. Its importance has increased because of the rising incidence of vitamin D deficiency. Yet, not all cases of osteomalacia are cured by vitamin D replacement, and furthermore, not all individuals with vitamin D deficiency develop osteomalacia. Although in the past osteomalacia was commonly caused by malabsorption, nutritional deficiency now is more common. In addition, recent literature suggests that nutritional vitamin D deficiency osteomalacia follows various bariatric surgeries for morbid obesity. Bone pain, tenderness, muscle weakness, and difficulty walking are all common clinical manifestations of osteomalacia. Diagnostic work-up involves biochemical assessment of vitamin D status and may also include a transiliac bone biopsy. Treatment is based on aggressive vitamin D repletion in most cases with follow-up biopsies if patients are started on antiresorptive or anabolic agents.

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## Endocrinology & Metabolism

Valentine, V. and D. F. Kruger (2010). "Considerations in Insulin Delivery Device Selection." Diabetes Technology & Therapeutics **12**: S98-S100. [PDF Full-Text](#)

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Recent guidelines from the American Diabetes Association and the European Association for the Study of Diabetes promote the use of insulin sooner rather than later in patients with type 2 diabetes to achieve goal range glucose control (<7%) but remain silent on a recommendation for delivery system. Even though there is widespread consensus among experts and payers that people with type 2 diabetes should use insulin earlier to achieve tight control, it still remains an elusive goal. Benefits of pen-type delivery devices include accurate dosing, faster and easier setting of dose and injection times, and increased patient acceptance and adherence. Before healthcare professionals can recommend a delivery device, it is critical they understand not only the medication in the device but also the various features and benefits to the different devices available and how those impact the patient. We will present considerations to assist in making appropriate device selection, to optimize patient success.

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## Gastroenterology

Tang, J., O. Sharif, C. Pai and A. L. Silverman (2010). "Mesalamine Protects Against Colorectal Cancer in Inflammatory Bowel Disease." Digestive Diseases and Sciences **55**(6): 1696-1703. [PDF Full-Text](#)

[Tang, Jeffrey; Sharif, Omar; Pai, Chetan; Silverman, Ann L.] Henry Ford Hosp, Henry Ford Hlth Syst, Div Gastroenterol, Dept Internal Med, Detroit, MI 48202 USA.

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Individuals with inflammatory bowel disease (IBD) are at increased risk of developing colorectal cancer (CRC) compared with the general population. Previous studies show this risk is strongly associated with dysplasia, extent of disease, duration of disease, and degree of inflammation, while chemoprevention of CRC has less support. Evaluate factors influencing risk of colorectal cancer development in inflammatory bowel disease patients. IBD patients with CRC were matched to controls by IBD type, age at diagnosis, sex, race, extent of disease, and disease duration. We compared body mass index, family history of IBD, family history of CRC, tobacco use, and cumulative and daily use of aminosalicylates, immunomodulators, folic acid, steroids, and nonsteroidal anti-inflammatory drugs. Statistical analysis was performed with logistic regression and receiver

operating characteristic (ROC) curves. Of 1,594 IBD patients, 30 CRC patients were identified. Of these, 18 CRC patients were matched to 30 controls. More control patients used a cumulative aminosalicylate dose of a parts per thousand yen4,500 g (46.6% versus 5.6%;  $P = 0.047$ ), folic acid (40.0% versus 16.7%;  $P = 0.002$ ), cumulative folic acid dose of a parts per thousand yen1,400 mg (30.0% versus 11.1%;  $P = 0.014$ ), and average daily folic acid dose of a parts per thousand yen1 mg (30.0% versus 16.7%;  $P = 0.002$ ) compared with CRC patients. Multivariate analysis showed that a cumulative aminosalicylate dose of a parts per thousand yen4,500 g reduced the risk of CRC by 97.6% ( $P = 0.047$ ). Folic acid reduced CRC risk by 89% ( $P = 0.002$ ). Aminosalicylate and folic acid use may decrease the risk of CRC among IBD patients.

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### **Hypertension & Vascular Research**

He, Q. A. (2010). "Tafazzin knockdown causes hypertrophy of neonatal ventricular myocytes." *American Journal of Physiology-Heart and Circulatory Physiology* **299**(1): H210-H216. [PDF Full-Text](#)

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He Q. Tafazzin knockdown causes hypertrophy of neonatal ventricular myocytes. *Am J Physiol Heart Circ Physiol* 299: H210-H216, 2010. First published March 26, 2010; doi: 10.1152/ajpheart.00098.2010.-Mutation of the mitochondrial protein tafazzin causes dilated cardiomyopathy in Barth syndrome. We employed an adenovirus as a vector to transfer tafazzin small hairpin RNA (shRNA) into neonatal ventricular myocytes (NVMs) to investigate the effects of tafazzin knockdown. The tafazzin shRNA adenovirus consistently knocked down tafazzin mRNA and lowered cardiolipin while significantly decreasing the production of ATP by the mitochondria. The phosphorylation of AMP-activated protein kinase and mitochondrial density were both increased in tafazzin knockdown NVMs compared with scrambled shRNA controls. When we tested whether tafazzin knockdown causes hypertrophy in vitro, we found that the surface area of NVMs infected with tafazzin shRNA adenovirus was significantly increased, as were the protein synthesis and expression of the hypertrophic marker gene, brain natriuretic peptide. Taken together, our data support the concept that a decreased tafazzin expression causes cardiomyocyte hypertrophy in vitro.

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### **Hypertension & Vascular Research**

Ren, Y., M. A. D'Ambrosio, R. Liu, P. J. Pagano, J. L. Garvin and O. A. Carretero (2010). "Enhanced myogenic response in the afferent arteriole of spontaneously hypertensive rats." *Am J Physiol Heart Circ Physiol* **298**(6): H1769-75. 2886653. [PDF Full-Text](#)

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Spontaneously hypertensive rats (SHRs) have normal glomerular capillary pressure even though renal perfusion pressure is higher, suggesting that preglomerular vessels exhibit abnormally high resistance. This may be due to increased superoxide ( $O(2)(-)$ ) production, which contributes to the vasoconstriction in hypertension. We tested the hypothesis that the myogenic response of the afferent arteriole (Af-Art) is exaggerated in SHRs because of increased levels of reactive oxygen species (ROS). Single Af-Arts were microdissected from kidneys of SHRs and Wistar-Kyoto (WKY) rats and microperfused in vitro. When perfusion pressure in the Af-Art was increased stepwise from 60 to 140 mmHg, the luminal diameter decreased by  $8.4 \pm 2.9\%$  in WKY Af-Arts but fell by  $29.3 \pm 5.6\%$  in SHR Af-Arts. To test whether ROS production is enhanced during myogenic response in SHRs, we measured chloromethyl-dichlorodihydrofluorescein diacetate acetyl ester (CM-H(2)DCFDA) fluorescence before and after increasing intraluminal pressure from 60 to 140 mmHg. Pressure-induced increases in ROS were fourfold greater in SHR Af-Arts compared with WKY Af-Arts (SHR,  $48.0 \pm 2.2\%$ ; and WKY,  $12.2 \pm 0.3\%$ ). To test whether  $O(2)(-)$  contributes to the myogenic response in SHRs, either the membrane-permeant  $O(2)(-)$  scavenger Tempol or the nox2-based NADPH oxidase (NOX2) inhibitor gp91ds-tat were added to the Af-Art lumen and bath and the myogenic response was tested before and after treatment. Both Tempol ( $10^{-4}$  M) and gp91ds-tat ( $10^{-5}$  M) significantly attenuated the pressure-induced constriction in SHR Af-Arts but not in WKY Af-Arts. We conclude that 1) pressure-induced constriction is exaggerated in SHR Af-Arts, 2) NOX2-derived  $O(2)(-)$  may contribute to the enhanced myogenic response, and 3)  $O(2)(-)$  exerts little influence on the myogenic response under normotensive conditions.

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## Infectious Diseases

Aguilar, J., V. Urday-Cornejo, S. Donabedian, M. Perri, R. Tibbetts and M. Zervos (2010). "Staphylococcus aureus meningitis: case series and literature review." Medicine (Baltimore) **89**(2): 117-25. [PDF Full-Text](#)

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Staphylococcus aureus meningitis is a challenging disease and little is known about its epidemiology. There are no established management guidelines. We retrospectively reviewed the clinical information, bacteriologic data, and outcomes of all 33 patients with cerebrospinal fluid (CSF) cultures positive for S aureus seen at a single urban teaching hospital from 1999 to 2008. Pulsed-field gel electrophoresis (PFGE) and polymerase chain reaction for staphylococcal cassette chromosome mec (SCCmec), accessory gene regulator (agr) typing, and Panton-Valentine leukocidin (PVL) loci were done on methicillin-resistant S aureus (MRSA) CSF isolates starting in 2005. S aureus caused 12 (36%) cases of postoperative and 21 (64%) cases of hematogenous meningitis. MRSA isolates were found in 6 (50%) cases of postoperative and 10 (48%) cases of hematogenous meningitis. Twelve (75%) of the 16 MRSA infections occurred in the last 5 years of the study. Hematogenous meningitis was associated with older age ( $p = 0.04$ ), injection drug use ( $p < 0.01$ ), community-acquired infection ( $p < 0.01$ ), underlying disease ( $p = 0.01$ ), staphylococcal infection outside the central nervous system ( $p = 0.01$ ), altered mental status ( $p = 0.02$ ), fever ( $p = 0.01$ ), septic shock ( $p = 0.03$ ), and bacteremia ( $p < 0.01$ ). The analysis of the 9 MRSA isolates showed 3 PFGE types: 3 USA100 (33%), 5 USA300 (56%), and 1 USANot100-1100 (11%). For SCCmec typing, there were 2 (22%) type II and 7 (78%) type IV. All USA300 strains were SCCmec IVa. For agr typing, there were 5 (56%) type I and 4 (44%) type II. Three isolates (33%) were positive for the PVL gene and were USA300 strains. Most patients received nafcillin or vancomycin with or without rifampin or trimethoprim/sulfamethoxazole for a mean period of 17 days (range, 1-42 d). Overall mortality was 36%, and it was associated with community-acquired infection ( $p = 0.02$ ). Postoperative and hematogenous S aureus meningitis are distinct clinical syndromes. S aureus hematogenous meningitis has devastating clinical consequences and elevated mortality rates, especially if it is acquired in the community. The incidence of MRSA meningitis increased over the last 5 years of the study. Treatment of choice is nafcillin for methicillin-sensitive strains and vancomycin for MRSA strains. The addition of trimethoprim/sulfamethoxazole or rifampin to vancomycin is recommended in severe cases and community-acquired MRSA infections. Linezolid is also a good option due to its good CSF penetration and favorable case reports. The mortality rate is higher in infections acquired in the community.

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## Infectious Diseases

Haque, N. Z., L. Cahuayme Zuniga, P. Peyrani, K. Reyes, L. Lamerato, C. L. Moore, S. Patel, M. Allen, E. Peterson, T. Wiemken, E. Cano, J. E. Mangino, D. H. Kett, J. A. Ramirez and M. J. Zervos (2010). "Relationship of Vancomycin MIC to Mortality in Patients with Methicillin-Resistant Staphylococcus aureus Hospital-Acquired, Ventilator-Associated and Healthcare-Associated Pneumonia." Chest **EPub Ahead of Print**. [PDF Full-Text](#)

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**Abstract BACKGROUND:** Methicillin-resistant Staphylococcus aureus (MRSA) is a leading cause of hospital-acquired pneumonia (HAP), ventilator-associated pneumonia (VAP), and healthcare-associated pneumonia (HCAP). These infections are associated with significant morbidity, mortality, and cost. The impact of vancomycin minimum inhibitory concentration (MIC) on mortality with MRSA pneumonia has not been determined. **METHODS:** Adult intensive care unit (ICU) patients with a diagnosis of MRSA HAP, VAP, HCAP were entered in the study. Clinical and laboratory information were prospectively collected. Vancomycin MIC and heteroresistance were determined for each MRSA isolate. Data were collected from February 2006 through August 2007. The primary outcome variable was all-cause mortality at day 28. A propensity score approach was used to adjust for confounding variables. **RESULTS:** The study sample consisted of 158 patients. All-cause mortality at 28 days was 32.3%. The majority of MRSA isolates had a vancomycin MIC  $\geq 1.5$   $\mu\text{g}/\text{mL}$  (115/158, 72.8%). Propensity score analysis demonstrated an increase in 28-day mortality as vancomycin MIC increased from 0.75 to 3  $\mu\text{g}/\text{mL}$  ( $P \leq 0.001$ ). Heteroresistance to vancomycin, demonstrated in 21.5% isolates, was not associated with mortality. **CONCLUSION:** Mortality in patients with

MRSA HAP, VAP, and HCAP increases as a function of the vancomycin MIC even for strains with MIC values within the susceptible range. Evaluation of vancomycin MICs should be contemplated at the institutional level and for individual cases of MRSA pneumonia. The use of vancomycin therapy in patients with MRSA pneumonia caused by isolates with MICs between 1 and 2 µg/mL should be undertaken with caution and alternative therapies should be considered.

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## Infectious Diseases

Harriott, M. M. and M. C. Noverr (2010). "Ability of *Candida albicans* Mutants to Induce *Staphylococcus aureus* Vancomycin Resistance During Polymicrobial Biofilm Formation." [Antimicrob Agents Chemother Epub Ahead of Print. PDF Full-Text](#)

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*C. albicans* and *S. aureus* form vigorous polymicrobial biofilms in serum, which may serve as the source of co-infection in patients. More importantly, *S. aureus* is highly resistant to vancomycin during polymicrobial biofilm formation, with no decreases in bacterial viability observed up to 1600 µg/ml drug. In these mixed species biofilms, *S. aureus* preferentially associates with *C. albicans* hyphae, which express a variety of unique adhesins. We tested *C. albicans* mutants deficient in transcriptional regulators of morphogenesis (CPH1, EFG1) and biofilm formation (BCR1) to investigate the role of hyphae in mediating polymicrobial biofilm formation. These mutants also have reduced expression of hyphal specific adhesins. The ability to form polymicrobial biofilms correlated with the ability to form hyphae in these mutants. However, only mutants that could adhere to the abiotic surface could induce *S. aureus* vancomycin resistance, regardless of the presence of hyphae. In examining factors that may mediate interspecies adhesion, we found that the *C. albicans* ALS family of adhesins were not involved (Als1-7, 9), nor was the hyphal specific adhesin Hwp1. Therefore, polymicrobial biofilm formation and subsequent antibiotic resistance is a multi-factorial process that may require a unique combination of fungal and/or bacterial adhesins.

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## Internal Medicine

Hadi, H. A. R., M. Zubaid, W. Al Mahmeed, A. A. El-Menyar, A. A. Alsheikh-Ali, R. Singh, A. Al-Nabti, N. Assad, K. Sulaiman, M. H. Al-Mallah, H. Amin, A. Al-Motarreb, H. Mahmoud and J. Al Suwaidi (2010). "The Prevalence and Outcome of Excess Body Weight Among Middle Eastern Patients Presenting With Acute Coronary Syndrome." [Angiology](#) **61**(5): 456-464.

[Article Request Form](#)

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We evaluated the effect of body weight on the outcome of Middle Eastern patients presenting with acute coronary syndrome (ACS). Analysis of the Gulf Registry of Acute Coronary Events (Gulf RACE) survey that included 7843 consecutive patients hospitalized with ACS was made. Patients were categorized as normal weight, overweight, or obese based on their body mass index (BMI). Overall, 67% of patients were overweight or obese; obese and overweight patients were more likely to be female and have diabetes mellitus, hypertension, dyslipidemia, and less likely to be smokers. In-hospital mortality, congestive heart failure, cardiogenic shock, and strokes were comparable between the groups, although patients with obesity were more likely to have recurrent ischemia and major bleeding complication in the ST-elevation myocardial infarction group. Excess body weight with ACS is associated with higher risk profile characteristics without an increase in hospital mortality or cardiovascular events.

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## Internal Medicine

Sullivan, M. D., B. Gaster, J. Russo, L. Bowlby, N. Rocco, N. Sinex, J. Livovich, H. Jasti and R. Arnold (2010). "Randomized Trial of Web-based Training About Opioid Therapy for Chronic Pain." Clinical Journal of Pain **26**(6): 512-517. [PDF Full-Text](#)

[Sullivan, Mark D.; Gaster, Barak; Russo, Joan] Univ Washington, Dept Psychiat & Behav Sci, Seattle, WA 98195 USA. [Bowlby, Lynn] Duke Univ, Dept Gen Internal Med, Durham, NC USA. [Rocco, Nicole] Henry Ford Hosp, Dept Internal Med, Detroit, MI 48202 USA. [Sinex, Noelle] Indiana Univ, Dept Internal Med, Indianapolis, IN 46204 USA. [Livovich, Jeffrey] Aetna Inc, Hartford, CT USA. [Jasti, Harish; Arnold, Robert] Univ Pittsburgh, Div Gen Internal Med, Pittsburgh, PA USA.

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**Objectives:** The treatment of chronic noncancer pain with chronic opioid therapy has increased rapidly, but medicine residents receive little training concerning this therapy. Therefore we conducted a trial to determine if an interactive web-based training focusing on shared decision-making for chronic opioid therapy improves knowledge and competence compared with exposure to practice guidelines. **Methods:** A randomized controlled educational trial of 213 internal medicine residents from 5 medicine residencies participating in the Residency Review Committee for Internal Medicine's Educational Innovations Project comparing access to interactive web-based training (COPE: Collaborative Opioid Prescribing Education) or access to the Veterans Affairs/Department of Defense Clinical Practice Guideline for the Management of Opioid Therapy for Chronic Pain. Pretraining and immediate posttraining knowledge test; pretraining and 60-day posttraining self-reported competence, satisfaction, patient-centeredness, and selected clinical behaviors were analyzed using t tests, Pearson chi(2), and Generalized Estimating Equations. **Results:** The web training group had greater increase in knowledge with training (chi(2) = 72.06, P < 0.00001) and greater self-rated competence in the management of outpatients with chronic pain (chi(2) = 6.48, P = 0.01), and specifically in the use of opioids in this management (chi(2) = 5.17, P = 0.02). Residents in both groups reported more satisfaction with managing chronic pain care after training (chi(2) = 52.72, P < 0.0001), though the web training was superior on subscales concerning training adequacy (chi(2) = 4.94, P = 0.026) and relationship quality (chi(2) = 5.79, P = 0.016). **Conclusions:** Exposure to an interactive web-based training focused on shared decision-making and communication skills was more effective than exposure to compatible practice guidelines for knowledge and self-reported competence in the management of chronic noncancer pain.

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## Internal Medicine

Tageja, N. and J. Nagi (2010). "Bendamustine: something old, something new." Cancer Chemotherapy and Pharmacology **66**(3): 413-423. [PDF Full-Text](#)

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Bendamustine (Treanda, Ribomustin) is a water-soluble, bifunctional chemotherapeutic agent that also has potential antimetabolite properties and only partial cross-resistance with other alkylators. Designed in 1963 and re-discovered in 1990s, this drug's unique mechanism of action and favorable side-effect profile promise a major role in the management of lymphoproliferative disorders. Bendamustine has been designated as an orphan drug in the United States, conferring prolonged market exclusivity. This article provides a comprehensive review of the data on efficacy and toxicity from trials investigating the use of bendamustine for the treatment of lymphoproliferative neoplasms. The pharmacology, pharmacokinetics, and pre-clinical studies with bendamustine are also reviewed. MEDLINE and Pubmed databases (1970-2010) were searched using the terms bendamustine, bendamustin, Treanda, Ribomustin, SDX-105, IMET-3393, and Cytostasan. All relevant articles were reviewed and references screened for additional articles. The databases of the American Society of Hematology (2004-2009) and the American Society of Clinical Oncology (1995-2009) were also searched for relevant abstracts. Bendamustine induces a remission in more than three-fourths of patients with rituximab-refractory indolent B cell non-Hodgkin lymphoma (NHL). Combined with rituximab in vitro, bendamustine shows synergistic effects against various leukemia and lymphoma cell lines. Clinical trials supporting these results show that bendamustine plus rituximab is highly effective in patients with relapsed-refractory indolent lymphoma, inducing remissions in 90% or more and a median progression-free survival of

23-24 months. Bendamustine has been reasonably well tolerated in clinical trials with low propensity to induce alopecia. Combination of bendamustine and rituximab has the potential to become a new standard first-line treatment option for patients with FL, MCL, and indolent lymphomas. Results of ongoing trials will help to further elucidate the optimal role of bendamustine in indolent NHL.

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### **Marketing & Public Relations**

Glenn, R. (2010). "Growth in a parched economy. The Henry Ford Health System's success story." Mark Health Serv **30**(2): 10-3. [Article Request Form](#)

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### **Medical Genetics**

Cowan, T. M., M. G. Blitzer and B. Wolf (2010). "Technical standards and guidelines for the diagnosis of biotinidase deficiency." Genet Med **Epub Ahead of Print**. [Article Request Form](#)

From the Department of Pathology, Stanford University Medical Center, Stanford, California; Division of Human Genetics, Department of Pediatrics, University of Maryland School of Medicine, Baltimore, Maryland; and Department of Medical Genetics, Henry Ford Hospital, and Center for Molecular Medicine and Genetics, Wayne State University School of Medicine, Detroit, Michigan.

Biotinidase deficiency is an autosomal recessively inherited disorder of biotin recycling that is associated with neurologic and cutaneous consequences if untreated. Fortunately, the clinical features of the disorder can be ameliorated or prevented by administering pharmacological doses of the vitamin biotin. Newborn screening and confirmatory diagnosis of biotinidase deficiency encompasses both enzymatic and molecular testing approaches. These guidelines were developed to define and standardize laboratory procedures for enzymatic biotinidase testing, to delineate situations for which follow-up molecular testing is warranted, and to characterize variables that can influence test performance and interpretation of results.

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### **Medical Genetics**

Pindolia, K., M. Jordan and B. Wolf (2010). "Analysis of mutations causing biotinidase deficiency." Hum Mutat **Epub Ahead of Print**. [PDF Full-Text](#)

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Biotinidase deficiency is an inherited disorder in which the vitamin, biotin, is not recycled. Individuals with biotinidase deficiency can develop neurological and cutaneous symptoms if they are not treated with biotin. Biotinidase deficiency screening has been incorporated into essentially all newborn screening programs in the United States and in many countries. We now report 140 known mutations in the biotinidase gene (BTD) that cause biotinidase deficiency. All types of mutations have been found to cause biotinidase deficiency. Variants have been identified throughout the coding sequence. Essentially all the variants result in enzymatic activities with less than 10 % of mean normal enzyme activity (profound biotinidase deficiency) with the exception of the c.1330G>C (p.D444H) mutation which results in an enzyme having 50% of mean normal serum activity. The putative three-dimensional structure of biotinidase has been predicted by homology to that of nitrilases/amidasases. The effect of the various missense mutations can be predicted to affect various important sites within the structure of the enzyme. This compilation of variants causing biotinidase deficiency will be useful to clinical laboratories that are performing mutation analysis for confirmational testing when the enzymatic results are equivocal for children identified through newborn screening. (c) 2010 Wiley-Liss, Inc.

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### **Nephrology**

Besarab, A., E. Martin, L. Ardelean, P. Pergola, V. De Silva, S. Zeig, F. Whittier, R. Zabaneh, A. Covic, M. Kaplan, A. Wiecek, B. Schiller, R. Leong, A. M. Duliege, C. Francisco

and I. C. Macdougall (2010). "Hemoglobin Decline Following Hematide (Tm) Dose Interruption." *American Journal of Kidney Diseases* **55**(4): 49. [PDF Full-Text](#)

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### **Nephrology**

Besarah, A., S. Rayamajhi, H. Al-Sharif, S. Frinak and J. Yee (2010). "Iron Repletion Decreases Platelet Counts (Plt) in Non-Dialysis Ckd Patients." *American Journal of Kidney Diseases* **55**(4): 50. [PDF Full-Text](#)

[Besarah, A.; Rayamajhi, S.; Al-Sharif, H.; Frinak, S.; Yee, Jerry] Henry Ford Hosp, Detroit, MI 48202 USA.

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### **Nephrology**

Sharma, A., J. Yee, S. R. Gandra, I. Khan and J. Petersen (2010). "DOSE CONVERSION ANALYSES BETWEEN EPOETIN ALFA (EPO) AND DARBEPEOTIN ALFA IN HOSPITAL-BASED DIALYSIS CENTERS (HBDCs)." *American Journal of Kidney Diseases* **55**(4): 278. [PDF Full-Text](#)

[Sharma, Amit] Boise Kidney & Hypertens Inst, Meridian, ID USA. [Yee, Jerry] Henry Ford Hosp, Detroit, MI 48202 USA. [Gandra, Shravanthi R.; Khan, Irfan; Petersen, Jeffrey] Amgen Inc, Thousand Oaks, CA 91320 USA.

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### **Nephrology**

Tolouian, R., D. S. Rao, M. Goggins, S. Bhat and A. Gupta (2010). "Seasonal variation of vitamin D in patients on hemodialysis." *Clin Nephrol* **74**(1): 19-24. [PDF Full-Text](#) (ID=journals@sladen.hfhs.org / PW=library / Scroll down to this article and click DOWNLOAD)

Division of Nephrology and Hypertension, Texas Tech University Health Science Center at El Paso, TX, Divisions of Nephrology and Bone and Mineral Research Laboratory (D.S.R.), Henry Ford Hospital, Detroit, MI, and Rockwell Medical Technologies, Wixom, MI, USA.

Background: Seasonal and racial differences in serum 25-hydroxyvitamin D levels have been studied extensively in the general population but not in patients with end-stage renal disease (ESRD). Methods: Serum 25-hydroxyvitamin D levels, the best available index of vitamin D nutrition, was measured at the end of summer (September) in 142 chronic hemodialysis patients and again at the end of winter (April) in 73 of these 142 patients, to determine the prevalence and risk factors for vitamin D deficiency. Results: The prevalence of vitamin D depletion, as defined by serum 25-hydroxyvitamin D level of less than 20 ng/ml (50 nmol/l), was 54% at the end of summer and further increased to 86% by the end of winter ( $p < 0.0001$  summer vs. winter). We observed that women and African-Americans had a greater prevalence of hypovitaminosis D ( $p < 0.0002$  and  $p < 0.001$  for both comparisons, respectively). Surprisingly, diabetic status, age, and the duration of ESRD were not associated with a significant increase in risk of vitamin D depletion. Conclusion: Vitamin D depletion is present in about half of ESRD patients with marked seasonal variations. Patients with ESRD should have more frequent assessments of their vitamin D nutrition by serum 25-hydroxyvitamin D levels, and vitamin D supplementation should be routinely prescribed, which may prevent many of the complications related to vitamin D deficiency and secondary hyperparathyroidism.

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### **Neurology**

Jia, Z. F., Q. Huang, C. S. Kang, W. D. Yang, G. X. Wang, S. Z. Yu, H. Jiang and P. Y. Pu (2010). "Overexpression of septin 7 suppresses glioma cell growth." *Journal of Neuro-Oncology* **98**(3): 329-340. [PDF Full-Text](#)

[Jia, Zhi-fan; Huang, Qiang; Kang, Chun-sheng; Yang, Wei-dong; Wang, Guang-xiu; Yu, Shi-zhu; Pu, Pei-yu] Tianjin Med Univ, Gen Hosp, Dept Neurosurg, Tianjin 300052, Peoples R China. [Jia, Zhi-fan; Huang, Qiang; Kang, Chun-sheng; Yang, Wei-dong; Wang, Guang-xiu; Yu, Shi-zhu; Pu, Pei-yu] Tianjin Neurol Inst, Lab Neurooncol, Tianjin 300052, Peoples R China. [Jiang, Hao] Henry Ford Hosp, Dept Neurol, Detroit, MI 48202 USA.

Pu, PY, Tianjin Med Univ, Gen Hosp, Dept Neurosurg, 152 An Shan Rd, Tianjin 300052, Peoples R China. [pupeiyu33@hotmail.com](mailto:pupeiyu33@hotmail.com)

Our previous study demonstrated that SEPT7 was downregulated at mRNA level in human gliomas. This study is to further examine the expression of SEPT7 in glioma samples and characterizes its role on cell cycle progression and growth of glioma cells. mRNA and protein expression of SEPT7 were detected by RT-PCR, immunohistochemical staining, and western blot analysis in human glioma specimens and normal brain tissues. A pcDNA3-SEPT7 expression plasmid was constructed and transfected into human glioblastoma cell line U251, and cell proliferation and apoptosis were examined. The growth of established U251 and TJ905 subcutaneous xenograft gliomas was measured in nude mice treated with pcDNA3-SEPT7 and U251 xenograft tumors treated with SEPT7 siRNA. SEPT7 expression is negatively correlated with the increase of glioma grade. Overexpression of SEPT7 is able to inhibit cell proliferation and arrest cell cycle progression in the G0/G1 phase both in vitro and in vivo. Knocking down further the already low endogenous expression of SEPT7 in U251 xenograft tumors with siRNA leads to faster tumor growth compared with control tumors. This study demonstrates that SEPT7 is involved in gliomagenesis and suppresses glioma cell growth.

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## Neurology

Lu, Y., F. Jiang, H. Jiang, K. Wu, X. Zheng, Y. Cai, M. Katakowski, M. Chopp and S. S. To (2010). "Gallic acid suppresses cell viability, proliferation, invasion and angiogenesis in human glioma cells." Eur J Pharmacol **Epub Ahead of Print**. [Article Request Form](#)

Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong S.A.R., People's Republic of China; Department of Neurology, Henry Ford Hospital, Detroit, MI, United States.

Gallic acid, an organic acid, also known as 3,4,5-trihydroxybenzoic acid, is cytotoxic against certain cancer cells, without harming normal cells. The objective of this study is to evaluate whether gallic acid can inhibit glioma cell viability, proliferation, invasion and reduce glioma cell mediated angiogenesis. Treatment of U87 and U251n glioma cells with gallic acid inhibited cell viability in a dose-dependent manner. BrdU and tube formation assays indicated that gallic acid significantly decreased glioma cell proliferation and tube formation in mouse brain endothelial cells, respectively. In addition, gallic acid decreased U87 cell invasion in vitro. Western blot analysis showed that expression of ADAM17, p-Akt and p-Erk was suppressed by gallic acid in both U87 and U251n cell lines. These data suggest that suppression of ADAM17 and downregulation of PI3K/Akt and Ras/MAPK signaling pathways may contribute to gallic acid-induced decrease of invasiveness. Gallic acid may be a valuable candidate for treatment of brain tumor.

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## Neurology

Rogers, L. R., P. Lorusso, P. Nadler, G. Malik, A. Shields and W. Kaelin (2010). "Erlotinib therapy for central nervous system hemangioblastomatosis associated with von Hippel-Lindau disease: a case report." J Neurooncol **Epub Ahead of Print**. [PDF Full-Text](#)

Department of Neurology, Henry Ford Hospital, Detroit, MI, USA, [Lisa.Rogers1@UHhospitals.org](mailto:Lisa.Rogers1@UHhospitals.org).

There is a need for effective systemic therapy for central nervous system (CNS) hemangioblastomas (HBs). We report a case of erlotinib therapy for CNS HBs in a patient with von Hippel-Lindau disease, in whom the HBs were associated with diffuse leptomeningeal seeding. We provide the first report of paired serum and cerebrospinal fluid (CSF) levels of erlotinib while on standard dosing. The patient exhibited neurologic and imaging signs of recurrent CNS HBs and progressive leptomeningeal metastasis following surgery, radiation, and stereotactic radiosurgery. The patient was treated with erlotinib 150 mg daily. The patient achieved a minor response to erlotinib therapy, including clinical improvement, reduction in size of two enhancing brain lesions (one of which, however, proved at autopsy to be radiation necrosis) and stabilization of leptomeningeal enhancement. In addition, the CSF white count improved. The duration of response was 9 months. The

median plasma and CSF levels of erlotinib while on treatment were 1146.06 and 247.83 ng/ml, respectively (CSF 21.6% of plasma). Erlotinib may have antitumor activity in CNS HBs.

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## Neurology

Shehadah, A., J. Chen, A. Zacharek, Y. Cui, M. Ion, C. Roberts, A. Kapke and M. Chopp (2010). "Niaspan treatment induces neuroprotection after stroke." Neurobiol Dis **EPub Ahead of Print**. [Article Request Form](#)

Department of Neurology, Henry Ford Hospital, Detroit, MI 48202, USA.

**INTRODUCTION:** Niaspan, an extended-release formulation of Niacin (vitamin B3), has been widely used to increase high density lipoprotein (HDL) cholesterol and to prevent cardiovascular diseases and stroke. In this study, we tested whether Niaspan administered acutely after stroke is neuroprotective. **METHODS:** Adult male rats (n=8/group) were subjected to 2h of middle cerebral artery occlusion (MCAo) and treated with or without different doses of Niaspan (20, 40 or 80mg/kg) at 2 and 24h after MCAo. A battery of functional outcome tests was performed, and serum HDL and triglycerides were measured. Rats were sacrificed at 7days after MCAo and lesion volumes were measured. The optimal dose of Niaspan treatment of stroke was chosen for immunostaining: deoxynucleotidyl transferase-mediated dUTP nick-end labeling (TUNEL), cleaved caspase-3, tumor necrosis factor alpha (TNF-alpha), vascular endothelial growth factor (VEGF) and phosphorylated phosphatidylinositol 3-kinase (p-PI3K). Another set of rats (n=4/group) were killed at 7days after MCAo for Western blot assay. **RESULTS:** Niaspan dose-dependently reduced infarct volume and improved functional outcome after stroke. No significant difference in HDL and triglyceride levels was detected between Niaspan treatments and MCAo control groups. Niaspan treatment significantly decreased the number of TUNEL-positive cells (105+/-17) and cleaved caspase-3 expression (381+/-33) in the ischemic brain compared to MCAo control (165+/-18; 650+/-61, respectively; p<=0.05). Niaspan treatment significantly reduced the expression of TNF-alpha (9.7+/-1.1% vs. 16+/-2.2%; p<=0.05) and negative correlations were observed between the functional tests and the expression of TNF-alpha (r=-0.71, p<=0.05). Niaspan treatment also significantly increased the expression of VEGF (5.2+/-0.9%) and PI3K/Akt (0.381+/-0.04%) in the ischemic brain compared with non-treated MCAo control (2.6+/-0.4%; 0.24+/-0.03, respectively; p<=0.05). The functional outcome was positively correlated with p-PI3K (r=0.7, p<=0.05). **CONCLUSIONS:** Treatment of stroke with Niaspan at 2h after MCAo reduces infarct volume and improves neurological outcome and provides neuroprotection. The neuroprotective effects of Niaspan were associated with reduction of apoptosis and attenuation of TNF-alpha expression. VEGF and the PI3K/Akt pathway may contribute to the Niaspan-induced neuroprotection after stroke.

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## Neurology

Varelas, P. N., T. Abdelhak, J. Wellwood, I. Shah, L. Hacein-Bey, L. Schultz and P. Mitsias (2010). "Nicardipine Infusion for Blood Pressure Control in Patients with Subarachnoid Hemorrhage." Neurocrit Care **EPub Ahead of Print**. [PDF Full-Text](#)

Department of Neurology, K-11, Henry Ford Hospital, 2799 West Grand Blvd, Detroit, MI, 48202, USA, [varelas@neuro.hfh.edu](mailto:varelas@neuro.hfh.edu).

**INTRODUCTION:** To evaluate the efficacy, tolerability, and safety of nicardipine infusion in controlling the elevated blood pressure after subarachnoid hemorrhage (SAH). **METHODS:** Nicardipine infusion was initiated if the individual pre-specified systolic blood pressure (SBP) level goal, mandated by the admitting neurosurgeon, was not met. Systolic and diastolic BPs were measured on admission, hourly during the infusion and 12 h before and after the infusion. **RESULTS:** Twenty-eight patients with SAH required 50 nicardipine infusions in order to achieve a mean SBP goal of 152 mmHg. The 3,112 extracted BP measurements showed that mean infusion SBP was significantly lower than admission and pre-infusion SBP (mean 146.5 vs. 177.1 and 155.6 mmHg, P < 0.001, respectively) and significantly higher than post-infusion SBP (146.5 vs. 142.6 mmHg, P = 0.002). Five infusions were stopped prematurely, because of hypotension (n = 3), emergent surgery (n = 1), and failure to reach the SBP goal (n = 1). Rebleeding was not observed in any patient. Nicardipine achieved SBP control in 59.9% of hourly infusion measurements, with a trend for higher proportion of success with higher SBP goals. **CONCLUSION:** In this study, nicardipine infusion was a safe and moderately effective treatment for BP control in patients with SAH. Although SBP during nicardipine infusion was higher than the pre-specified goal in a significant percentage of hourly observations, this may be due to the drug administration protocol and other factors such as analgesia and sedation.

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## Neurology

Wijdicks, E. F. M., P. N. Varelas, G. S. Gronseth and D. M. Greer (2010). "Evidence-based guideline update: Determining brain death in adults Report of the Quality Standards Subcommittee of the American Academy of Neurology." Neurology **74**(23): 1911-1918.

[PDF Full-Text](#)

[Wijdicks, Eelco F. M.] Mayo Clin, Div Crit Care Neurol, Rochester, MN USA. [Varelas, Panayiotis N.] Henry Ford Hosp, Dept Neurol, Detroit, MI 48202 USA. [Gronseth, Gary S.] Univ Kansas, Med Ctr, Dept Neurol, Kansas City, KS USA. [Greer, David M.] Massachusetts Gen Hosp, Dept Neurol, Boston, MA 02114 USA. Wijdicks, EFM, Amer Acad Neurol, 1080 Montreal Ave, St Paul, MN 55116 USA. [guidelines@aan.com](mailto:guidelines@aan.com)

Objective: To provide an update of the 1995 American Academy of Neurology guideline with regard to the following questions: Are there patients who fulfill the clinical criteria of brain death who recover neurologic function? What is an adequate observation period to ensure that cessation of neurologic function is permanent? Are complex motor movements that falsely suggest retained brain function sometimes observed in brain death? What is the comparative safety of techniques for determining apnea? Are there new ancillary tests that accurately identify patients with brain death? Methods: A systematic literature search was conducted and included a review of MEDLINE and EMBASE from January 1996 to May 2009. Studies were limited to adults (aged 18 years and older). Results and recommendations: In adults, there are no published reports of recovery of neurologic function after a diagnosis of brain death using the criteria reviewed in the 1995 American Academy of Neurology practice parameter. Complex-spontaneous motor movements and false-positive triggering of the ventilator may occur in patients who are brain dead. There is insufficient evidence to determine the minimally acceptable observation period to ensure that neurologic functions have ceased irreversibly. Apneic oxygenation diffusion to determine apnea is safe, but there is insufficient evidence to determine the comparative safety of techniques used for apnea testing. There is insufficient evidence to determine if newer ancillary tests accurately confirm the cessation of function of the entire brain. *Neurology* (R) 2010;74:1911-1918

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## Neurology

Zhang, L., M. Chopp, R. L. Zhang, L. Wang, J. Zhang, Y. Wang, Y. Toh, M. Santra, M. Lu and Z. G. Zhang (2010). "Erythropoietin amplifies stroke-induced oligodendrogenesis in the rat." PLoS One **5**(6): e11016. 2884017. [PDF Full-Text](#)

Department of Neurology, Henry Ford Hospital, Detroit, Michigan, USA.

BACKGROUND: Erythropoietin (EPO), a hematopoietic cytokine, enhances neurogenesis and angiogenesis during stroke recovery. In the present study, we examined the effect of EPO on oligodendrogenesis in a rat model of embolic focal cerebral ischemia. METHODOLOGY AND PRINCIPAL FINDINGS: Recombinant human EPO (rhEPO) at a dose of 5,000 U/kg (n = 18) or saline (n = 18) was intraperitoneally administered daily for 7 days starting 24 h after stroke onset. Treatment with rhEPO augmented actively proliferating oligodendrocyte progenitor cells (OPCs) measured by NG2 immunoreactive cells within the peri-infarct white matter and the subventricular zone (SVZ), but did not protect against loss of myelinating oligodendrocytes measured by cyclic nucleotide phosphodiesterase (CNPase) positive cells 7 days after stroke. However, 28 and 42 days after stroke, treatment with rhEPO significantly increased myelinating oligodendrocytes and myelinated axons within the peri-infarct white matter. Using lentivirus to label subventricular zone (SVZ) neural progenitor cells, we found that in addition to the OPCs generated in the peri-infarct white matter, SVZ neural progenitor cells contributed to rhEPO-increased OPCs in the peri-infarct area. Using bromodeoxyuridine (BrdU) for birth-dating cells, we demonstrated that myelinating oligodendrocytes observed 28 days after stroke were derived from OPCs. Furthermore, rhEPO significantly improved neurological outcome 6 weeks after stroke. In vitro, rhEPO increased differentiation of adult SVZ neural progenitor cells into oligodendrocytes and enhanced immature oligodendrocyte cell proliferation. CONCLUSIONS: Our in vivo and in vitro data indicate that EPO amplifies stroke-induced oligodendrogenesis that could facilitate axonal re-myelination and lead to functional recovery after stroke.

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## Neurosurgery

Mazzola, C. A., D. A. Lobel, S. Krishnamurthy, G. M. Bloomgarden and D. L. Benzil (2010). "Efficacy of Neurosurgery Resident Education in the New Millennium: The 2008 Council of State Neurosurgical Societies Post-Residency Survey Results." Neurosurgery **EPub Ahead of Print**. [Article Request Form](#)

Department of Neurosciences and Pediatrics, Atlantic Health System-Goryeb Children's Hospital, Morristown, New Jersey (Mazzola) Department of Neurosurgery, University of Florida, Jacksonville, Florida (Lobel) Department of Neurosurgery, Henry Ford Hospital, Detroit, Michigan (Krishnamurthy) Section of Neurosurgery, Hospital of St. Raphael, New Haven, Connecticut (Bloomgarden) Department of Neurosurgery, Westchester Brain and Spine Surgery, Hartsdale, New York (Benzil).

**BACKGROUND:** Neurosurgical residency training paradigms have changed in response to Accreditation Council for Graduate Medical Education mandates and demands for quality patient care. Little has been done to assess resident education from the perspective of readiness to practice. **OBJECTIVE:** To assess the efficacy of resident training in preparing young neurosurgeons for practice. **METHODS:** In response to Resolution V-2007F of the Council of State Neurosurgical Societies, a survey was developed for neurosurgeons who applied for oral examination, Part II of the American Board of Neurological Surgery boards, in 2002 through 2007 (N = 800). The survey was constructed in "survey monkey" format and sent to 775 of 800 (97%) neurosurgeons for whom e-mail addresses were available. **RESULTS:** The response rate was 30% (233/775). Most neurosurgeons were board certified (n = 226, 97%). General neurosurgical training was judged as adequate by a large majority (n = 188, 80%). Sixty-percent chose to pursue at least 1 additional year of fellowship training (n = 138, 60%). Surgical skills training was acceptable, but 6 skill-technique areas were reported to be inadequate (endovascular techniques, neurosurgical treatment of pain, stereotactic radiosurgery, epilepsy surgery, cranial base surgery, and stereotactic neurosurgery). Respondents also noted inadequate education in contract negotiation, practice evaluation, and management. **CONCLUSION:** The study suggests that neurosurgeons believed that they were well trained in their surgical skills except for some areas of subspecialization. However, there is a significant need for improvement of resident training in the areas of socioeconomic and medicolegal education. Continued evaluation of the efficacy of neurosurgical education is important.

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## Neurosurgery

Torcuator, R. G., R. Thind, M. Patel, Y. S. Mohan, J. Anderson, T. Doyle, S. Ryu, R. Jain, L. Schultz, M. Rosenblum and T. Mikkelsen (2010). "The role of salvage reirradiation for malignant gliomas that progress on bevacizumab." Journal of Neuro-Oncology **97**(3): 401-407. [PDF Full-Text](#)

[Torcuator, Roy G.; Thind, Ravneet; Rosenblum, Mark; Mikkelsen, Tom] Henry Ford Hlth Syst, Hermelin Brain Tumor Ctr, Detroit, MI 48202 USA. [Torcuator, Roy G.; Mohan, Y. S.; Rosenblum, Mark; Mikkelsen, Tom] Henry Ford Hlth Syst, Dept Neurosurg, Detroit, MI 48202 USA. [Patel, Mehul; Ryu, Samuel] Henry Ford Hlth Syst, Dept Radiat Oncol, Detroit, MI 48202 USA. [Anderson, Joseph] Henry Ford Hlth Syst, Dept Oncol, Detroit, MI 48202 USA. [Doyle, Thomas] Henry Ford Hlth Syst, Dept Hematol & Oncol, Detroit, MI 48202 USA. [Jain, Rajan] Henry Ford Hlth Syst, Dept Radiol, Detroit, MI 48202 USA. [Schultz, Lonni] Henry Ford Hosp, Dept Biostat & Res Epidemiol, Detroit, MI 48202 USA.  
Torcuator, RG, Henry Ford Hlth Syst, Hermelin Brain Tumor Ctr, 2799 W Grand Blvd, Detroit, MI 48202 USA.  
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Bevacizumab and irinotecan are effective against recurrent malignant gliomas. However, at subsequent progression, patients rarely respond to a second bevacizumab-containing chemotherapeutic regimen. Salvage re-irradiation with bevacizumab for recurrent but bevacizumab naive malignant gliomas showed encouraging results. We performed a retrospective review of the medical records of 23 patients treated with either fractionated stereotactic radiotherapy (FSRT) or stereotactic radiosurgery (SRS) after progression on an initial bevacizumab regimen. Patients were treated after re-irradiation with bevacizumab but combined with a different chemotherapy. We then compared them to another 23 patients who progressed on an initial bevacizumab ? chemotherapy regimen. These patients did not receive re-irradiation but bevacizumab was continued combined with a different chemotherapy. Patients treated with FSRT/SRS/bevacizumab had a longer median progression-free period (2.6 vs. 1.7 months, P = 0.009), longer median post FSRT/SRS treatment survival (7.2 vs. 3.3 months, P = 0.03) and higher radiographic response rate (22 vs. 0%, P = 0.049). FSRT or SRS followed by bevacizumab + chemotherapy may have a role for patients who progress on bevacizumab.

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### **Obstetrics & Gynecology**

Saed, G. M., Z. L. Jiagn, N. M. Fletcher, R. Ali-Fehmi, M. P. Diamond, H. M. Abu-Soud and A. R. Munkarah (2010). "Inhibition of NADPH Oxidoreductase Promotes Apoptosis in Epithelial Ovarian Cancer Cells." Reproductive Sciences **17**(3): 113A-113A. [Article Request Form](#)

[Saed, Ghassan M.; Jiagn, Zhongliang L.; Fletcher, Nicole M.; Ali-Fehmi, Rouba; Diamond, Michael P.; Abu-Soud, Husam M.; Munkarah, Adnan R.] Wayne State Univ, Detroit, MI USA. [Munkarah, Adnan R.] Henry Ford Hlth Syst, Womens Hlth, Detroit, MI USA.

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### **Obstetrics & Gynecology**

Saed, G. M., Z. L. L. Jiang, N. M. Fletcher, A. Al Arab, H. M. Abu-Soud, A. M. Munkarah and M. P. Diamond (2010). "Dichloroacetate Induces Apoptosis of Epithelial Ovarian Cancer Cells through the Inhibition of Oxidative Stress Enzymes." Reproductive Sciences **17**(3): 113A-114A. [Article Request Form](#)

[Saed, Ghassan M.; Jiang, Zhongliang L.; Fletcher, Nicole M.; Al Arab, Ali; Abu-Soud, Husam M.; Munkarah, Adnan M.; Diamond, Michael P.] Wayne State Univ, Detroit, MI USA. Henry Ford Hlth Inst, Detroit, MI USA.

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### **Other**

Choi, W. I., M. Y. Lee, D. Oh, B. H. Rho and C. A. Hales (2010). "Estimated Incidence of Acute Pulmonary Embolism in a Korean Hospital." Clin Appl Thromb Hemost **Epub Ahead of Print**. [PDF Full-Text](#)

Patients with acute pulmonary embolism (PE) were identified retrospectively from patients hospitalized during a 2-year period from 2005 to 2007. Among adult patients ( $\geq 20$  years), the incidence of established acute PE was 88 (0.17%) of 50 882 in Dongsan Hospital. The incidence of acute PE at Dongsan Hospital was 26% lower than that at Henry Ford Hospital ( $P < .01$ ). Among patients more than 50 years of age, PE was more frequent in women (0.32%; 95% CI, 0.24-0.4) than in men (0.15%; 95% CI, 0.1-0.21;  $P < .01$ ). Among all patients with PE older than 20 years of age, 68 (0.21%) of 31 869 (95% CI, 0.17-0.26) were from the medical service and 18 (0.08%) of 23 139 (95% CI, 0.04-0.11;  $P < .01$ ) were from the surgical service. The estimated incidence of PE in a university teaching hospital in Korea was 0.17%, it was about two thirds of that in North America.

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### **Otolaryngology**

Shuman, A. G., S. A. Duffy, D. L. Ronis, S. L. Garetz, S. A. McLean, K. E. Fowler and J. E. Terrell (2010). "Predictors of Poor Sleep Quality Among Head and Neck Cancer Patients." Laryngoscope **120**(6): 1166-1172. [PDF Full-Text](#)

[Shuman, Andrew G.; Duffy, Sonia A.; Garetz, Susan L.; McLean, Scott A.; Terrell, Jeffrey E.] Univ Michigan, Dept Otolaryngol, Ann Arbor, MI 48109 USA. [Duffy, Sonia A.] Univ Michigan, Dept Psychiat, Ann Arbor, MI 48109 USA. [Duffy, Sonia A.; Ronis, David L.] Univ Michigan, Sch Nursing, Ann Arbor, MI 48109 USA. [Duffy, Sonia A.; Ronis, David L.; Fowler, Karen E.] Veteran Affairs Ann Arbor Healthcare Syst, Hlth Serv Res & Dev, Vet Affairs Ctr Clin Management Res, Ann Arbor, MI USA. [McLean, Scott A.] Henry Ford Hlth Syst, Dept Otolaryngol, Detroit, MI USA.

Terrell, JE, Univ Michigan Hosp, Dept Otolaryngol, Taubman Ctr 1904, Ann Arbor, MI 48109 USA.

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Objectives/Hypothesis: The objective of this study was to determine the predictors of sleep quality among head and neck cancer patients 1 year after diagnosis. Study Design: This was a prospective, multisite cohort study of head and neck cancer patients (N = 457). Methods: Patients were surveyed at baseline and 1 year after

diagnosis. Chart audits were also conducted. The dependent variable was a self-assessed sleep score 1 year after diagnosis. The independent variables were a 1 year pain score, xerostomia, treatment received (radiation, chemotherapy, and/or surgery), presence of a feeding tube and/or tracheotomy, tumor site and stage, comorbidities, depression, smoking, problem drinking, age, and sex. Results: Both baseline (67.1) and 1-year post-diagnosis (69.3) sleep scores were slightly lower than population means (72). Multivariate analyses showed that pain, xerostomia, depression, presence of a tracheotomy tube, comorbidities, and younger age were statistically significant predictors of poor sleep 1 year after diagnosis of head and neck cancer ( $P < .05$ ). Smoking, problem drinking, and female sex were marginally significant ( $P < .09$ ). Type of treatment (surgery, radiation and/or chemotherapy), primary tumor site, and cancer stage were not significantly associated with 1-year sleep scores. Conclusions: Many factors adversely affecting sleep in head and neck cancer patients are potentially modifiable and appear to contribute to decreased quality of life. Strategies to reduce pain, xerostomia, depression, smoking, and problem drinking may be warranted, not only for their own inherent value, but also for improvement of sleep and the enhancement of quality of life.

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## **Pathology**

Dhar, J. P., L. Gregoire, W. Lancaster, A. Stark, L. Essenmacher, D. Schultz, L. Chiodo, J. Ager, A. Schwartz, M. Husain and R. J. Sokol (2010). "Latent HPV in Cervical Neoplasia in SLE." Reproductive Sciences **17**(3): 181. [Article Request Form](#)

[Dhar, J. P.; Gregoire, L.; Lancaster, W.; Essenmacher, L.; Chiodo, L.; Ager, J.; Schwartz, A.; Husain, M.; Sokol, R. J.] Wayne State Univ, SOM, Detroit, MI USA. [Stark, A.] P Geisinger Hlth Sys, Danville, PA USA. [Schultz, D.] P Henry Ford Hlth Sys, Detroit, MI USA.

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## **Pathology**

Meier, F. A. and B. Jones (2010). "Patient safety and sources of error in point-of-care testing." Laboratoriumsmedizin-Journal of Laboratory Medicine **34**(3): 141-147. [Article Request Form](#)

[Meier, Frederick A.] Henry Ford Hosp, Henry Ford Hlth Syst, Dept Pathol & Lab Med, Detroit, MI 48202 USA. Meier, FA, Henry Ford Hosp, Henry Ford Hlth Syst, Dept Pathol & Lab Med, 2700 W Grand Blvd, Detroit, MI 48202 USA. [Fmeier1@hfhs.org](mailto:Fmeier1@hfhs.org)

Patient safety is the project of reducing medical errors by creating and enforcing standards of practice, tracking and publishing errors to guide countermeasures, improving information transfer, and fostering increased accountability among healthcare providers. Errors in point-of-care testing (POCT) can be practical, cognitive, or axiological (the latter are errors of judgment). Countermeasures to errors in POCT have been organized into a laboratory ethos of test operator training and competence demonstration, explicit written procedures, routine quality control, recorded, verified, and retrievable patient results, and external proficiency testing. Three characteristics of POCT can defeat these countermeasures: technical limitations of POCT methods, the rapid availability of their results, and the tendency of these results to change patient care immediately. In the United States, government regulations of POCT have not been a success, but government mandated accreditation programs have been more effective. Laboratorians who monitor of POCT-called in the United States point-of-care test coordinators-have been essential to reporting and tracking POCT errors. They have exploited electronic information transfer to do so and to increase accountability for POCT among clinician test operators. Although a modified version of Gerald Kost's taxonomy of sources of errors offers a systematic approach to POCT error classification, major preventable adverse events (called "sentinel events" in the United States) tend to drive POCT patient safety. This circumstance has stressed the importance of clinical contexts. Tight glycemic control using POCT whole blood glucose is the example with which we illustrate the challenges to patient safety, from the technical limitations, rapid result availability, and impact on therapy, characteristic of POCT.

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## **Pulmonary & Critical Care Medicine**

Khalid, I., M. Omari, T. J. Khalid, E. Castillo, A. Khandelwal and R. Kattoo (2010). "Pericardial tamponade after superior vena cava stent: are nitinol stents safe?" Asian Cardiovasc Thorac Ann **18**(3): 294-6. [PDF Full-Text](#)

Placement of a single new-generation nitinol stent resulted in acute pericardial tamponade in a 70-year-old man with superior vena cava syndrome.

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### **Radiation Oncology**

Janic, B. and A. S. Arbab (2010). "The role and therapeutic potential of endothelial progenitor cells in tumor neovascularization." [ScientificWorldJournal](#) **10**: 1088-99. 2889926.  
[PDF Full-Text](#)

Cellular and Molecular Imaging Laboratory, Department of Radiology, Henry Ford Hospital, Detroit, MI, USA.

Although the cellular and molecular mechanisms of tumor growth and metastasis are not completely understood, it is established that formation and growth of new blood vessels is a *conditio sine qua non* for tumor survival, growth, and expansion. Numerous studies over the past decades demonstrated that neovascularization associated with tumor growth occurs via angiogenic and vasculogenic mechanisms that involve sprouting angiogenesis, intussusceptive angiogenesis, vessel co-option, vasculogenic mimicry, lymphangiogenesis, and the recruitment of endothelial progenitor cells (EPCs). Due to their ability to self-renew, circulate, home to the ischemic sites, and differentiate into mature endothelial cells, EPCs hold enormous potential to be used as a diagnostic and/or therapeutic agent in antitumor therapies. Hence, this review focuses on EPCs and their role in tumor angiogenesis with the emphasis on EPC recruitment/migration, and the potential use of EPCs as a therapeutic tool and imaging probe.

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### **Radiation Oncology**

Rao, S., A. Patel, K. Levin, M. Lu, K. Garbarino, D. Myers, E. M. Walker, S. Ryu, J. H. Kim and B. Movsas (2010). "How Often are Previously Undetected Radiographic Abnormalities Detected at the Time of CT Simulation for Breast Cancer Patients?" [American Journal of Clinical Oncology-Cancer Clinical Trials](#) **33**(3): 262-264. [PDF Full-Text](#)

[Rao, Sishir; Patel, Anushka; Levin, Kenneth; Garbarino, Kim; Walker, Eleanor M.; Ryu, Samuel; Kim, Jae Ho; Movsas, Benjamin] Henry Ford Hosp, Dept Radiat Oncol, Detroit, MI 48202 USA. [Rao, Sishir; Myers, Daniel] Henry Ford Hosp, Dept Radiol, Detroit, MI 48202 USA. [Lu, Mei] Henry Ford Hlth Syst, Dept Biostat & Res Epidemiol, Detroit, MI USA.

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**Objectives:** In most institutions, planning computed tomography (CT) scans are not interpreted by diagnostic radiologists. The purpose of this analysis was to determine the percentage of cases in which a previously undetected radiographic finding was found on review of CT simulation images by diagnostic radiology. **Methods:** At the Henry Ford West Bloomfield Center, CT simulations are prospectively interpreted by diagnostic radiologists and a formal report is generated. CT simulation scan reports of 332 consecutive breast cancer patients from 2000 to 2006 were reviewed. The percentage of these reports in which a previously undetected abnormality was noted on the planning CT was determined. Prior and subsequent diagnostic CT scans were also reviewed to determine the clinical relevance of these diagnostic abnormalities. **Results:** Of 332 patients with CT simulations for breast cancer treatment planning, 52 patients (16%) had a newly detected abnormality noted. Of these, 31 patients (or 60% of the abnormal findings) were deemed by diagnostic radiology to have potentially significant findings (eg, "can not exclude metastatic disease"), and a follow-up CT or magnetic resonance imaging scan was recommended. Abnormalities in this category included previously undetected lung nodules, liver lesions, kidney/adrenal lesions, and sclerotic bony lesions. On follow-up, however, to date, these findings have demonstrated no clinical significance, although further follow-up is needed in many patients. **Conclusions:** In this study, a significant proportion of breast cancer patients undergoing CT planning studies were diagnosed with potential abnormalities for which follow-up was recommended by diagnostic radiology. To date, these findings have not been clinically relevant, though further follow-up is needed in many of the patients. Thus, in cases of clinical uncertainty, a diagnostic radiologist should be consulted and follow-up imaging obtained if necessary.

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## Radiation Oncology

Sahgal, A., L. J. Ma, I. Gibbs, P. C. Gerszten, S. Ryu, S. Soltys, V. Weinberg, S. Wong, E. Chang, J. Fowler and D. A. Larson (2010). "Spinal Cord Tolerance for Stereotactic Body Radiotherapy." International Journal of Radiation Oncology Biology Physics **77(2)**: 548-553.

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Purpose: Dosimetric data are reported for five cases of radiation-induced myelopathy after stereotactic body radiotherapy (SBRT) to spinal tumors. Analysis per the biologically effective dose (BED) model was performed. Methods and Materials: Five patients with radiation myelopathy were compared to a subset of 19 patients with no radiation myelopathy post-SBRT. In all patients, the thecal sac was contoured to represent the spinal cord, and doses to the maximum point, 0.1-, 1-, 2-, and 5-cc volumes, were analyzed. The mean normalized 2-Gy-equivalent BEDs (nBEDs), calculated using an alpha/beta value of 2 for late toxicity with units Gy 2/2, were compared using the 1 test and analysis of variance test. Results: Radiation myelopathy was observed at the maximum point with doses of 25.6 Gy in two fractions, 30.9 Gy in three fractions, and 14.8, 13.1, and 10.6 Gy in one fraction. Overall, there was a significant interaction between patient subsets and volume based on the nBED ( $p = 0.0003$ ). Given individual volumes, a significant difference was observed for the mean maximum point nBED ( $p = 0.01$ ). Conclusions: The maximum point dose should be respected for spine SBRT. For single-fraction SBRT 10 Gy to a maximum point is safe, and up to five fractions an nBED of 30 to 35 Gy 2/2 to the thecal sac also poses a low risk of radiation myelopathy. (C) 2010 Elsevier Inc.

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## Radiation Oncology

Schipani, S., R. Jain, K. Shah, J. P. Rock, B. Movsas, M. Rosenblum and S. Ryu (2010). "Clinical, dosimetric, and radiographic correlation of radiation injury involving the brainstem and the medial temporal lobes following stereotactic radiotherapy for neoplasms of central skull base." Journal of Neuro-Oncology **98(2)**: 177-184. [PDF Full-Text](#)

[Schipani, Stefano; Movsas, Benjamin; Ryu, Samuel] Henry Ford Hlth Syst, Dept Radiat Oncol, Detroit, MI 48202 USA. [Jain, Rajan; Shah, Keyur] Henry Ford Hosp, Dept Neuroradiol, Detroit, MI 48202 USA. [Rock, Jack P.; Rosenblum, Mark; Ryu, Samuel] Henry Ford Hosp, Dept Neurosurg, Detroit, MI 48202 USA. Ryu, S, Henry Ford Hlth Syst, Dept Radiat Oncol, 2799 W Grand Blvd, Detroit, MI 48202 USA. [sryu1@hfhs.org](mailto:sryu1@hfhs.org)

Stereotactic Radiotherapy (SRT) is more commonly used for skull base tumors in conjunction with the technical development of radiation intensity modulation. Purpose of this study is to correlate clinical and radiographic characteristics of delayed radiation injury (RI) occurring around central skull base following SRT with SRT dosimetric data. Total of six patients were identified to have developed RI in the vicinity of SRT target volume out of 141 patients who received SRT in the center or near-center of the skull base. The images and medical records were retrospectively reviewed. The analysis was performed for RI location, time of development, imaging and clinical characteristics and evolution of RI and correlated with SRT dosimetric analysis using image fusion with follow-up MRI scans. Mean follow-up time was 24 +/- 9 months. During the follow-up period, twelve sites of RI were found in 6 patients. They were clinically symptomatic in 4/6 patients (66.6%) at median 12.5 months after SRT. Mean time interval between SRT and detection of RI was 9 +/- 3, 18.5 +/- 5, and 13.5 months for brainstem, temporal lobe, and cerebellum/labyrinth lesions, respectively. All RI lesions were included in the region of high SRT doses. After steroid and symptomatic treatment, 50% of RI

lesions showed complete response, and 40% showed partial response. RI can occur around the skull base because of irregular shape of target tumor, its close proximity to normal brain parenchyma, and inhomogeneity of dose distribution. Brainstem lesions occurred earlier than temporal lobe RI. The majority of the RI lesions, not mixed with the tumor in this study, showed radiographic and clinical improvement with steroid and symptomatic treatments.

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## Sleep Medicine

Drake, C., T. Roehrs, N. Breslau, E. Johnson, C. Jefferson, H. Scofield and T. Roth (2010). "The 10-Year Risk of Verified Motor Vehicle Crashes in Relation to Physiologic Sleepiness." Sleep **33**(6): 745-752. [PDF Full-Text](#)

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[Breslau, Naomi] Michigan State Univ, Dept Epidemiol, E Lansing, MI 48824 USA. [Johnson, Eric] Res Triangle Inst Int, Behav Hlth Epidemiol Program, Res Triangle Pk, NC USA.

Drake, C, Henry Ford Hosp, Sleep Disorders & Res Ctr, Biosci Staff, 2799 W Grand Blvd, CFP3, Detroit, MI 48202 USA. [cdrake1@hfhs.org](mailto:cdrake1@hfhs.org)

Study Objectives: The purpose of this study was to determine the risk of DMV documented crashes as a function of physiological sleepiness in a population-based sample. Design: 24-hour laboratory assessment (nocturnal polysomnogram and daytime MSLT) and 10-year crash rate based on DMV obtained accident records. Participants: 618 individuals (mean age = 41.6 +/- 12.8; 48.5% male) were recruited from the general population of southeastern Michigan using random-digit dialing techniques. Results: Subjects were divided into 3 groups based on their average MSLT latency (On minutes) as follows: excessively sleepy, 0.0 to <= 5.0 (n = 69); moderately sleepy, 5.0 to <= 10.0 (n = 204); and alert, > 10 (n = 345). Main outcome measures were DMV data on accidents from 1995-2005. Rates for all accidents in the 3 MSLT groups were: excessively sleepy = 59.4%, moderately sleepy = 52.5%, alert = 47.3%. Excessively sleepy subjects were at significantly greater risk of an accident over the 10-year period compared to alert subjects. A similar relation was observed when we limited the database to those accident victims with severe injury (excessively sleepy = 4.3%, moderately sleepy = 0.5%, alert = 0.6%; P = 0.028). When the victim was the only occupant of the car, subjects in the lowest MSLT group (highest sleepiness) had the greatest crash rate compared with alert individuals (excessively sleepy = 52.2%, moderately sleepy = 42.2%, alert = 37.4%; P = 0.022). Interventions: N/A Conclusions: These data demonstrate that the MSLT, a physiological measure of sleepiness, is predictive of an increased risk of DMV documented automotive crashes in the general population.

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## Sleep Medicine

Steinmiller, C. L., T. A. Roehrs, E. Harris, M. Hyde, M. K. Greenwald and T. Roth (2010). "Differential Effect of Codeine on Thermal Nociceptive Sensitivity in Sleepy Versus Nonsleepy Healthy Subjects." Experimental and Clinical Psychopharmacology **18**(3): 277-283. [Article Request Form](#)

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Basal sleepiness/alertness modulates drug effects. Sleepiness produced by sleep restriction leads to increased nociceptive sensitivity, suggesting opioid analgesia may also be modulated by sleepiness/alertness. This study compared thermal nociceptive sensitivity in sleepy versus non-sleepy participants after codeine or placebo. Twelve healthy normal adults, 18 to 35 years of age, had an 8-hr nocturnal polysomnogram (NPSG) followed by a Multiple Sleep Latency Test (MSLT; Carskadon and Dement, 1987). All had sleep efficiencies > 80% on their NPSG: 6 had average MSLT >= 8 min (nonsleepy group) and 6 had latencies < 8 min (sleepy group). Participants were assessed following 8-hr time-in-bed with standard MSLT, and nociceptive assessments (using a radiant heat stimulation method) were conducted the following day with codeine 30 mg bid. (0900 and 1300) or placebo bid. Finger withdrawal latency (FWL) in seconds was measured to 5 different heat intensities randomly presented to the index finger pad of each hand. Mean +/- 1 SD MSLT values in the sleepy group were 4.72 +/- 1.83 min and 13.04 +/- 4.90 min in the nonsleepy group. As hypothesized, increased FWL (decreased nociception) was observed with lower heat intensities, codeine, and in the

nonsleepy group. More important, there was a Group X Drug interaction with codeine increasing FWL in the nonsleepy, but not the sleepy, group. These data show the analgesic effects of codeine are diminished in sleepy versus nonsleepy individuals. They suggest clinical differences in response to analgesics are partly explained by basal state of sleepiness alertness.

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## **Surgery**

Fleischer, D. E., R. Odze, B. F. Overholt, J. Carroll, K. J. Chang, A. Das, J. Goldblum, D. Miller, C. J. Lightdale, J. Peters, R. Rothstein, V. K. Sharma, D. Smith, V. Velanovich, H. Wolfsen and G. Triadafilopoulos (2010). "The Case for Endoscopic Treatment of Non-dysplastic and Low-Grade Dysplastic Barrett's Esophagus." Digestive Diseases and Sciences **55**(7): 1918-1931. [PDF Full-Text](#)

[Triadafilopoulos, George] Stanford Univ, Sch Med, Div Gastroenterol & Hepatol, Stanford, CA 94305 USA. [Wolfsen, Herbert] Mayo Clin Florida, Dept Internal Med, Jacksonville, FL 32224 USA. [Velanovich, Victor] Henry Ford Hosp, Dept Surg, Detroit, MI 48202 USA. [Smith, Daniel] Mayo Clin Florida, Dept Surg, Jacksonville, FL 32224 USA. [Sharma, Virender K.] Az Ctr Digest Hlth, Gilbert, AZ 85297 USA. [Rothstein, Richard] Dartmouth Hitchcock Med Ctr, Dept Internal Med, Lebanon, NH 03756 USA. [Peters, Jeffrey] Univ Rochester, Dept Surg, Rochester, NY 14642 USA. [Lightdale, Charles J.] Columbia Presbyterian Med Ctr, Dept Internal Med, New York, NY 10032 USA. [Miller, Daniel] Emory Univ, Med Ctr, Dept Surg, Atlanta, GA 30322 USA. [Goldblum, John] Cleveland Clin Fdn, Dept Pathol, Cleveland, OH 44195 USA. [Chang, Kenneth J.] Univ Calif Irvine, Orange, CA 92868 USA. [Carroll, John] Georgetown Univ, Dept Internal Med, Washington, DC 20007 USA. [Overholt, Bergein F.] Gastrointestinal Associates, Knoxville, TN 37909 USA. [Odze, Robert] Brigham & Womens Hosp, Dept Pathol, Boston, MA 02115 USA. [Fleischer, David E.; Das, Ananya] Mayo Clin Arizona, Dept Internal Med, Scottsdale, AZ 85259 USA. Triadafilopoulos, G, Stanford Univ, Sch Med, Div Gastroenterol & Hepatol, 300 Pasteur Dr, M-211, Stanford, CA 94305 USA. [fleischer.david@mayo.edu](mailto:fleischer.david@mayo.edu) [rodze@partners.org](mailto:rodze@partners.org) [bfoverholt@gihealthcare.com](mailto:bfoverholt@gihealthcare.com) [carrolj1@gunet.georgetown.edu](mailto:carrolj1@gunet.georgetown.edu) [kchang@uci.edu](mailto:kchang@uci.edu) [das.ananya@mayo.edu](mailto:das.ananya@mayo.edu) [goldblj@ccf.org](mailto:goldblj@ccf.org) [daniel\\_miller@emoryhealthcare.org](mailto:daniel_miller@emoryhealthcare.org) [cjl18@columbia.edu](mailto:cjl18@columbia.edu) [Jeffrey\\_peters@urmc.rochester.edu](mailto:Jeffrey_peters@urmc.rochester.edu) [richard.rothstein@Dartmouth.edu](mailto:richard.rothstein@Dartmouth.edu) [yksharma@azcdh.com](mailto:yksharma@azcdh.com) [smith.c.daniel@mayo.edu](mailto:smith.c.daniel@mayo.edu) [vvelano1@hfhs.org](mailto:vvelano1@hfhs.org) [Wolfsen.Herbert@mayo.edu](mailto:Wolfsen.Herbert@mayo.edu) [vagt@stanford.edu](mailto:vagt@stanford.edu)

Non-dysplastic mucosa (ND-) in Barrett's esophagus (BE) shows clonal molecular aberrations, loss of cell cycle control, and other features of "neoplasia." These changes occur prior to morphologic expression of neoplasia (dysplasia). Morphologic evaluation of dysplasia is fraught with error, and, as a result, often leads to false-negative and false-positive diagnoses. Early "crypt dysplasia" is difficult to detect, and is often missed in routine biopsy specimens. Some studies show substantial progression rates of low-grade dysplasia (LGD), and crypt dysplasia, to esophageal adenocarcinoma (EAC). Dysplasia, even when fully developed, may, in certain circumstances, be difficult to differentiate from non-dysplastic (regenerating) BE. Radiofrequency ablation (RFA) is a safe and effective method for removing mucosa at risk of cancer. Given the difficulties of dysplasia assessment in mucosal biopsies, and the molecular characteristics of ND-BE, this technique should be considered for treatment of all BE patients, including those with ND or LGD. Post-ablation neo-squamous epithelium reveals no molecular abnormalities, and is biologically stable. Given that prospective randomized controlled trials of ablative therapy for ND-BE aiming at reducing EAC incidence and mortality are unlikely to be completed in the near future, endoscopic ablation is a valid management option. The success of RFA in achieving safe, uniform, reliable, and predictable elimination of BE allows surgeons to combine fundoplication with RFA. Currently, there is no type of treatment for dysplastic or non-dysplastic BE that achieves a complete response in 100% of patients, eliminates all risk of developing cancer, results in zero adverse events, is less expensive in terms of absolute costs than surveillance, is durable for 20+ years, or eliminates the need for surveillance. Regardless, RFA shows established safety, efficacy, durability, and cost-effective profiles that should be considered in the management of patients with non-dysplastic or low-grade dysplastic BE.

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## **Surgery**

Vanderlan, W. B., Z. Zhang and M. S. Abouljoud (2010). "Duodenal enteroglucagonoma revealed by differential comparison of serum and tissue glucagon reactivity with Siemens' Double Glucagon Antibody and DakoCytomation's Polyclonal Rabbit Anti-Human Glucagon: a case report." J Med Case Reports **4**: 178. 2896376. [PDF Full-Text](#)

**ABSTRACT: INTRODUCTION:** This case report demonstrates that the differential immunohistochemical reactivities of Siemens' Double Antibody Glucagon compared to DakoCytomation's Polyclonal Rabbit Anti-Human Glucagon allow for pathologic distinction of enteral versus pancreatic glucagonoma. **CASE PRESENTATION:** A 64-year-old Caucasian man was diagnosed with a duodenal enteroglucagonoma following presentation with obstructive jaundice. He had a low serum glucagon level using Siemens' Double Antibody Glucagon, a clinical syndrome consistent with glucagon hypersecretion. A periampullary mass biopsy proved to be a neuroendocrine tumor, with positive immunohistochemical reactivity to DakoCytomation's Polyclonal Rabbit Anti-Human Glucagon. **CONCLUSIONS:** Differential comparison of the immunohistochemical reactivities of Siemens' Double Antibody Glucagon and DakoCytomation's Polyclonal Rabbit Anti-Human Glucagon discerns enteroglucagon from pancreatic glucagon.

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## Urology

Ficarra, V., B. M. Benway, S. B. Bhayani, C. G. Rogers, J. R. Porter, G. Guazzoni, N. Buffi and A. Mottrie (2010). "Reply from Authors re: Ricardo Brandina, Inderbir S. Gill. Robotic Partial Nephrectomy: New Beginnings. *Eur Urol* 2010;57:778-9." *European Urology* **58**(1): 53-56. [PDF Full-Text](#)

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## Urology

Hellenthal, N. J., A. Hussain, P. E. Andrews, P. Carpentier, E. Castle, P. Dasgupta, J. Kaouk, S. Khan, A. Kibel, H. Kim, M. Manoharan, M. Menon, A. Mottrie, D. Ornstein, J. Palou, J. Peabody, R. Pruthi, L. Richstone, F. Schanne, H. Stricker, R. Thomas, P. Wiklund, G. Wilding and K. A. Guru (2010). "Surgical Margin Status After Robot Assisted Radical Cystectomy: Results From the International Robotic Cystectomy Consortium." *Journal of Urology* **184**(1): 87-91. [PDF Full-Text](#)

[Hellenthal, Nicholas J.; Hussain, Abid; Kim, Hyung; Wilding, Greg; Guru, Khurshid A.] Roswell Pk Canc Inst, Dept Urol Oncol, Buffalo, NY 14263 USA. [Andrews, Paul E.; Castle, Erik] Mayo Clin, Scottsdale, AZ USA. [Carpentier, Paul; Mottrie, Alex] Onze Lieve Vrouw Hosp, Aalst, Belgium. [Dasgupta, Prokar; Khan, Shamim] Guys Hosp, London SE1 9RT, England. [Thomas, Raju] Tulane Univ, New Orleans, LA 70118 USA. [Kibel, Adam] Washington Univ, St Louis, MO USA. Univ Miami, Miami, FL USA. [Stricker, Hans] Henry Ford Hlth Syst, Detroit, MI USA. [Pruthi, Raj] Univ N Carolina, Chapel Hill, NC USA. [Ornstein, David] 21st Century Oncol, Naples, FL USA. Fundacio Puigvert, Barcelona, Spain. [Richstone, Lee] Arthur Smith Inst Urol, Long Isl City, NY USA. [Schanne, Francis] Urol Surg Associates Delaware, Wilmington, DE USA. [Wiklund, Peter] Karolinska Univ, Stockholm, Sweden. [Kaouk, Jihad] Cleveland Clin Fdn, Cleveland, OH 44195 USA. Guru, KA, Roswell Pk Canc Inst, Dept Urol Oncol, Buffalo, NY 14263 USA. [khurshid.guru@roswellpark.org](mailto:khurshid.guru@roswellpark.org)

**Purpose:** Positive surgical margins at radical cystectomy confer a poor prognosis. We evaluated the incidence and predictors of positive surgical margins in patients who underwent robot assisted radical cystectomy for bladder cancer. **Materials and Methods:** Using the International Robotic Cystectomy Consortium database we identified 513 patients who underwent robot assisted radical cystectomy, as done by a total of 22 surgeons at 15 institutions from 2003 to 2009. After stratification by age group, gender, pathological T stage, nodal status, sequential case number and institutional volume logistic regression was used to correlate variables with the likelihood of a positive surgical margin. **Results:** Of the 513 patients 35 (6.8%) had a positive surgical margin. Increasing 10-year age group, lymph node positivity and higher pathological T stage were significantly associated with an increased likelihood of a positive margin ( $p = 0.010$ ,  $<0.001$  and  $p <0.001$ , respectively). Gender, sequential case number and institutional volume were not significantly associated with margin

positivity. The rate of margin positive disease at cystectomy was 1.5% for pT2 or less, 8.8% for pT3 and 39% for pT4 disease. Conclusions: Positive surgical margin rates at robot assisted radical cystectomy for advanced bladder cancer were similar to those in open cystectomy series in a large, multi-institutional, prospective cohort. Sequential case number, a surrogate for the learning curve and institutional volume were not significantly associated with positive margins at robot assisted radical cystectomy.

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## Urology

Kiran, R. P., M. Rottoli, N. Pokala and V. W. Fazio (2010). "Long-term Outcomes After Local Excision and Radical Surgery for Anal Melanoma: Data From a Population Database." Diseases of the Colon & Rectum **53**(4): 402-408. [PDF Full-Text](#)

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**PURPOSE:** Anal melanoma is rare and associated with a poor outcome. Previous studies that have reported outcomes after surgical treatment are limited by both small number of participants and treatment at single centers only. This study evaluates survival of patients undergoing surgery for anal melanoma from a prospective, population-based database. **METHODS:** Characteristics and survival of patients undergoing rectal resection or local excision for anal melanoma of the anus, anal canal, and overlapping region of the rectum from 1982 to 2002 were obtained from the Surveillance, Epidemiology and End Results database and compared. **RESULTS:** A total of 160 patients were included in the study. Details of previous surgical procedures were available for 109 of the study patients: 60 (55%) underwent local excision and 49 (45%) rectal resection. Patients who underwent local excision were significantly older (73.5 vs 65.1 years,  $P < .001$ ), whereas those who had undergone rectal resection had a greater proportion of regional disease (73.5% vs 16.7%,  $P < .001$ ). The median survival of the 2 groups was similar (rectal resection vs local excision: 17 vs 28 months,  $P = .3$ ). Rectal resection and local excision were associated with similar survival for patients in both regional ( $P = .6$ ) and localized ( $P = .95$ ) stages. Outcomes for patients who were appropriately pathologically staged after rectal resection depended on localized vs regional stage (5-year survival: 43.1% vs 12.5%,  $P = .17$ ). Survival for patients in localized and regional stages who underwent rectal resection was similar to that for patients with corresponding clinical stage who underwent local excision. **CONCLUSION:** Survival of patients with anal melanoma is similar after local excision or rectal resection irrespective of whether patients have localized or regional stage of disease.

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## Urology

Wambi, C. O., S. A. Siddiqui, L. S. Krane, P. K. Agarwal, H. J. Stricker and J. O. Peabody (2010). "Early oncological outcomes of robot-assisted radical prostatectomy for high-grade prostate cancer." BJU Int **EPub Ahead of Print**. [PDF Full-Text](#)

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**Study Type - Therapy (case series) Level of Evidence 4** **OBJECTIVE** To evaluate the oncological outcomes of patients with specimen Gleason 8 and 9 prostate cancers and to determine factors that predict biochemical recurrence-free survival (BCRFS) after robot-assisted radical prostatectomy (RARP). **PATIENTS AND METHODS** Of 4156 patients who underwent RARP from January 2001 to 2009, we identified 368 men with Gleason 8 or 9 tumours who met the inclusion criteria. BCR was defined as a PSA level of  $\geq 0.2$  ng/mL with a second rising value. The Kaplan-Meier method and log-rank test were used to compare BCRFS while factors that predict BCRFS were determined by Cox proportional hazards modelling. **RESULTS** The median age and PSA level were 62 years and 6.4 ng/mL for men with Gleason 8, and 63 years and 6.7 ng/mL for Gleason 9 cancers. The median (interquartile range, IQR) overall follow-up was 23 (10-46) months and 19 (7-37) months for Gleason 8 and 9 tumours, respectively. At 60 months the mean (se) overall BCRFS was 36 (5)% and for Gleason 8 it was 47 (6)% and for Gleason 9 it was 21 (7)% ( $P < 0.001$ ). At 5 years, extraprostatic extension (pT3a) resulted in BCRFS of 52 (9)% for Gleason 8 tumours and 21 (11)% for Gleason 9 ( $P = 0.012$ ). On multivariable analysis, lymph node invasion, specimen Gleason score, pathological stage and tumour volume predicted BCRFS. **CONCLUSIONS** Early results suggest RARP monotherapy performs comparably to RP for BCRFS in men with high-grade prostate cancer. There are significant oncological differences between Gleason 8 and 9 tumours.