AUA
Association of University Anesthesiologists
Update
Fall 2010

Contents

ASA Responds to Health Affairs Article by AANA

Alexander A. Hannenberg, M.D.
ASA President

Dear Member,

As you are aware, the American Association of Nurse Anesthetists (AANA) sponsored a study published in the *Health Affairs* August issue titled, "No Harm Found When Nurse Anesthetists Work Without Supervision By Physicians." (*Health Affairs*. 2010; 29(8):1469-1475). I wanted to share with you the work we have done to thwart this misinformation as it enters the public domain.

Leadership has worked with staff to complete a thorough analysis of the study. On Monday, August 2, 2010, I had the opportunity to provide ASA's perspective on the study to the *Boston Globe's* Elizabeth Cooney who writes the column "White Coat Notes." You can read the story online at **http://www.boston.com/news/health/blog/2010/08/nurse_anestheti.html**.

The following is an overview of the points we discussed from ASA's analysis with the reporter as key shortcomings of the study, with which you should be familiar in case this issue arises:

- The study's methodology relies on billing data:
  - QZ modifier overstates independent practice because
    - Paperwork and documentation reduced for anesthesiologist who may report anesthesiologist directed care with this billing modifier.
    - Even in the absence of an anesthesiologist, a surgeon is present and providing medical input into the patient's care; characterizing this as "independent" CRNA practice misrepresents the actual nature of the care delivered.
  - The study reviews about 480,000 cases that would have a predicted anesthesia-related mortality in *two cases*: analysis of anesthesia-related mortality is grossly underpowered.
    - Billing data does not permit distinguishing between surgical and anesthesia complications or mortality.

Alexander A. Hannenberg, M.D.

- Anesthesiologists' advances in patient safety must be preserved. Recent data showed one death per 200,000-300,000 anesthetics administered. (Committee on Quality of Healthcare in America, Institute of Medicine: *To Err is Human, Building a Safer Health System*. Edited by Kohn L, Corrigan J, Donaldson M. Washington, National Academy Press, 1999:241).
- Anesthesiologists not only care for patients undergoing the most complex procedures (base unit differential) but also the sicker patients undergoing all procedures (unrecognized selection bias). These considerations would suggest dramatically better outcomes for CRNAs, but this is not seen. In fact, CRNA-only cases (QZ) actually showed worsening mortality and complications, while other groups improved (see tables on page 7). Even equivalent outcomes with lower risk cases would be a troubling finding. And the most significant improvement in mortality and complications took place in the ACT model of practice, further supporting the value of anesthesiologists' involvement in care. (Silber 2000 study: >6 excess deaths/1,000 cases from failure to rescue from surgical or anesthetic complication in absence of anesthesiologist).

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Advocacy 101

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Fundamental health system reform is inevitable. As such, various stakeholders (insurance companies, hospitals, pharmaceuticals, nurses, lawyers, etc.) already utilize sophisticated techniques to forward their respective agendas. They are primed and ready to take action! Therefore, it is imperative that physicians aggressively influence the political process in order to shape a sustainable and balanced U.S. health care system of the future.

So how do we become effective players in this game? I understand that the thought of reaching out to elected officials can be daunting; however, like most things in life, taking the first step is the greatest obstacle. And before you know it, you will become a greater asset to your profession and to your patients. To get you started, I have outlined the 10 most important concepts that you must embrace in order to become an effectual shepherd for change. More detailed information is available at: **www.asahq.org/Washington/2009ASAGrassrootsNetworkDCAdvocacyGuide.pdf**.

1. Know your audience: Find your elected representatives at **capwiz.com/asa/home**. Pay special attention to whether he/she serves on a key committee.
2. Build a relationship: Making contact repeatedly, while being credible as well as reasonable, will build a solid relationship between you and your elected officials. Nothing is of greater value to a member of Congress than an informed, active and friendly constituent!
3. Start with a letter or a phone call: It is key to establish a relationship with your elected official before making an actual visit. Written communication and targeted phone calls are an excellent method of demonstrating your interest in critical issues and your willingness to help.
4. One issue at a time: Every communication - a phone conversation, written (letter versus e-mail) or even a personal visit - should stick to one issue. You should avoid presenting a list of concerns at any encounter, since it will diminish the urgency of truly critical issues.
5. Know your issue: Do your homework through general searches on the Internet, or more specifically from the main ASA website at **www.asahq.org** under "What's New" as well as **www.asahq.org/Washington/grassroots.htm** to get directly to "Washington Alerts." Present your opinion and back it up with hard facts. On the same token, be very familiar with opposing arguments and have evidence to contradict them.
6. Use personal anecdotes: Nothing drives home the importance of an issue like a succinct and clear personal experience. Tell your elected officials how the situation affects you, your colleagues and the patients you care for.
7. Offer solutions: Anyone can complain, so avoid an interaction where you just talk about how bad a problem is. Once you have conveyed the gravity of your issue, tell your elected official exactly what you would like to see done to fix the problem.
8. Act locally: It may not be feasible to make frequent visits to Washington, D.C. to meet with our elected officials. However, the ASA does sponsor an annual Legislative Conference. Additional venues to engage members of Congress are through their district offices as well as local meetings.
9. Time it right: The most eloquent letter or call becomes obsolete if it arrives after a vote; and if a letter arrives too early, it is forgotten. However, if timing it just right proves to be difficult, it is better to reach someone early in the debate rather than after they have made up their mind.
10. Follow-up: After all this effort, it is essential to close with a follow-up "thank-you" letter. Be polite, yet persistent. Elected officials remember constituents who take the time to follow up on things.

Sadeq A. Quraishi, M.D., M.H.A.

You now have the basic knowledge to become an active participant in the design of our future health care system. A brief outline of issues particularly important to academic anesthesiology is included below - so get busy! And I hope to work with you at the 2011 ASA Legislative Conference (May 2-4) in Washington, D.C. **www.asahq.org/Washington/LC2010legconf.htm**.

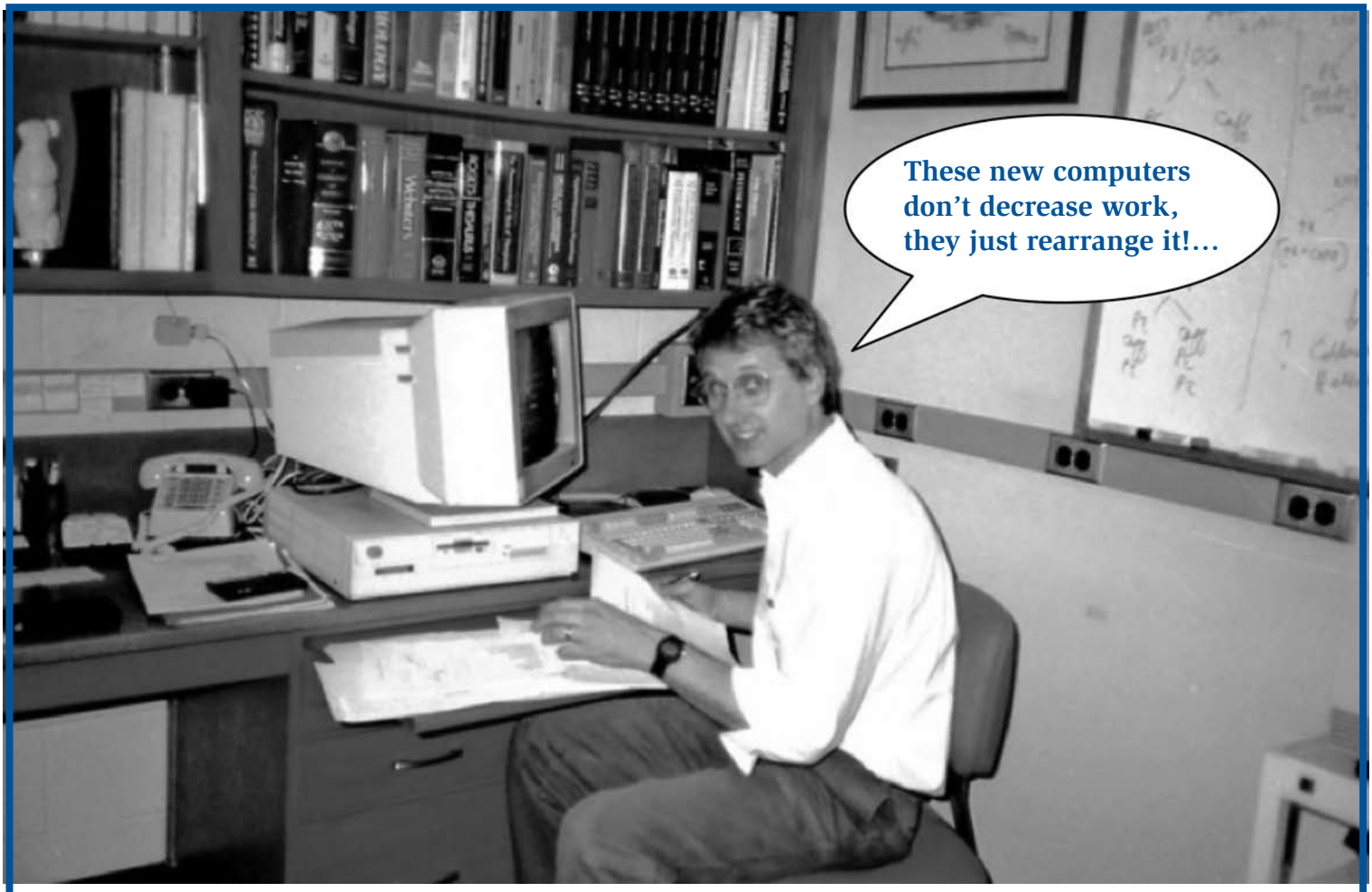
Independent Payment Advisory Board (IPAB): A new independent commission is tasked with putting forth proposals to "reduce cost growth" and "improve quality of care for Medicare beneficiaries." The commission will recommend cost-saving initiatives should per-capita spending exceed a government determined threshold. The Commission is also authorized to make recommendations to "constrain the rate of growth in the private sector" as well. The Commission's recommendations could become law without congressional action and could not be challenged in court. The ASA opposes Medicare payment cuts mandated by an unaccountable commission. More information is available at **asahq.org/news/asanews040510.htm**.

National Health Care Workforce Commission: Establishes an independent commission to provide objective information and recommendations to Congress and the administration to align federal health care workforce resources with national needs. The ASA nominated Mary Dale Peterson, M.D., M.H.A. to the commission. The National Workforce Commission will announce appointments no later than September 30, 2010. More information is available at: **asahq.org/news/asanews063010.htm**.

Sustainable Growth Rate (SGR): On June 25, 2010, President Obama signed into law the "Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010." The bill halts the 21 percent Medicare physician payment cut and provides physicians a 2.2 percent positive payment update for services provided June 1 through November 30, 2010. The ASA supports congressional action to fully repeal the current SGR formula and implement a new Medicare physician payment update mechanism that accurately reflects the increasing annual costs of providing services to Medicare beneficiaries. More information is available at: **asahq.org/Washington/01Rebuilding.pdf**.

Doctor of Nursing Practice: The American Association of Colleges of Nursing plans to convert its advanced practice nursing degrees from a Master's level to a Doctor of Nursing Practice (DNP) degree by 2015. Patients led to believe that they are receiving care from a "doctor," who is not a physician (M.D. or D.O.), but who is a DNP may put their health at risk. As of June 2010, nearly 130 universities are currently accepting students into DNP programs, and more than 100 additional nursing schools are considering starting DNP programs nationwide. In 2006, the American Medical Association approved ASA-sponsored Resolution-211 **www.asahq.org/news/asanews070606.htm**. Since the adoption of Resolution 211, ASA, as a Steering Committee member of the SOPP, has worked to advance truth and transparency legislation at the state level. More information is available at **viewer.zmags.com/publication/1facba6d#/1facba6d/52**.

A special thanks to Moriah Merkel, ASA Grassroots Program Administrator, for her help in preparing this article.



Prescient words by Greg Schuler, Research Assistant, Hershey Medical Center, circa 1985

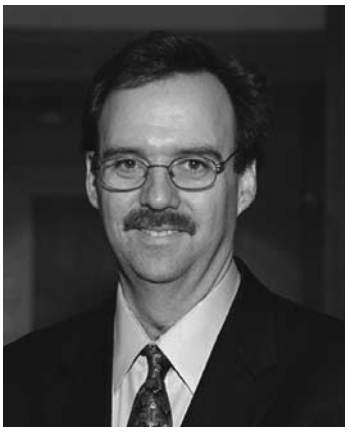
2011 AUA Annual Meeting in Philadelphia

Lee A. Fleisher, M.D.
Dripps Professor and Chairman
on behalf of the Department of Anesthesiology and Critical Care at the University of Pennsylvania.

The Department of Anesthesiology and Critical Care at the University of Pennsylvania School of Medicine is honored to host the AUA Annual Meeting in May 2011. The department has a long history which is intertwined with the history of the AUA. Its first chair, Robert D. Dripps, M.D., and many of its luminary faculty, including Drs. James Eckenhoff, Leroy Vandam and Austin Lamont, helped found the AUA. The annual meeting was last hosted by the University of Pennsylvania under the leadership of David Longnecker, M.D. in Philadelphia 20 years ago.

The department's history began with the establishment of a Division of Anesthesia within the Department of Surgery in 1943 and the appointment of Dr. Dripps as chief. In 1966, in collaboration with the eminent surgeon Isador Ravdin, Dr. Dripps oversaw the transition from division to independent status as a department within the School of Medicine. Under its two subsequent chairs, Harry Wollman and David Longnecker, the department continued its tradition of academic excellence contributing to original scientific discovery and teaching of future generations of anesthesiologists. Today, there are >145 full-time faculty, 77 to provide care for adult patients at the Hospital, the University of Pennsylvania and Penn Presbyterian Medical Center, three at the Veterans Administration Hospital and >65 at the Children's Hospital of Philadelphia. We have a large portfolio of physician scientists studying a diverse group of questions, including mechanisms of anesthesia, molecular pharmacology of anesthetic agents, perioperative neurotoxicity, mechanisms of sleep, sepsis, traumatic brain injury, neuroprotection, and health services research. There are currently two NIH T-32 training grants within the department: one, running continuously for more than 35 years, focused on basic and clinical research in anesthesiology, and a new training grant focused on critical care health services research that involves medicine, surgery and pediatrics. The department continues to have a strong residency with 24 residents per class and 16 interns. There are accredited fellowships in critical care, pain management, cardiac anesthesiology, pediatric anesthesiology, and pediatric critical care. There are fellowships in neurocritical care (UCNS accredited) and a joint cardiac-critical care two-year fellowship with many unaccredited fellowships available.

The department provides a diverse group of clinical services at our various hospitals and is involved in critical care extensively in multiple sites The Critical Care Division oversees telemedicine in the health system. The pain management group actively manages the palliative care service at the hospital of the University of Pennsylvania. Over the past several years, we have collaborated with our surgical colleagues to provide perioperative care and management to the post-cardiac surgical ward service. Administratively, we are involved in multiple areas within the hospitals and medical school, with Bill Hanson, M.D. being appointed Chief Medical Information Officer for the Health System and Robert Gaiser, M.D. as an Advisory Dean for the medical students.



Lee A. Fleisher, M.D.

Being part of a prestigious university has its advantages with respect to collaboration. We have taken advantage of these opportunities, as will become evident during the host program. We are fortunate to have speakers at this year's Annual Meeting from the Wharton School of Economics, the School of Veterinary Medicine, the Annenberg School of Communications, and the College of Arts and Sciences. We look forward to seeing everyone at this year's annual meeting in beautiful Philadelphia.

Philadelphia* *The City of Brotherly Love*

Philadelphia is the largest city in Pennsylvania and the sixth-most-populous city in the United States. AUA members should find no shortage of interesting places to visit.

The city is home to many national historical sites that relate to the founding of the United States. Independence National Historical Park is the center of these historical landmarks. Independence Hall, where the Declaration of Independence was signed, and the Liberty Bell are the city's most famous attractions. Other historic sites include homes for Edgar Allan Poe, Betsy Ross, and Thaddeus Kosciuszko, early government buildings such as the First and Second Banks of the United States, Fort Mifflin, and the Gloria Dei (Old Swedes') Church National Historic Site.

Philadelphia's major science museums include the Franklin Institute, which contains the Benjamin Franklin National Memorial, the Academy of Natural Sciences, the Mütter Museum (of American College of Surgeons), and the University of Pennsylvania Museum of Archaeology and Anthropology. History museums include the National Constitution Center, the Atwater Kent Museum of Philadelphia History, the National Museum of American Jewish History, the African American Museum in Philadelphia, the Historical Society of Pennsylvania, the Grand Lodge of Free and Accepted Masons in the State of Pennsylvania, and the Masonic Library and Museum of Pennsylvania and Eastern State Penitentiary. Philadelphia is home to the United States' first zoo and hospital as well as to Fairmount Park, one of America's oldest and largest urban parks.

The city contains many art museums such as the Pennsylvania Academy of the Fine Arts and the Rodin Museum, the largest collection of work by Auguste Rodin outside of France. The city's major art museum, the Philadelphia Museum of Art, is one of the largest art museums in the United States and features the steps made popular by the film *Rocky*.

Areas such as South Street and Old City have a vibrant night life. The Avenue of the Arts in Center City contains many restaurants and theaters, such as the Kimmel Center for the Performing Arts, which is home to the Philadelphia Orchestra, generally considered one of the top five orchestras in the United States, and the Academy of Music, the nation's oldest continually operating venue, home to the Opera Company of Philadelphia and the Pennsylvania Ballet.

Philadelphia is famous for its varieties and quality of cuisine. The city is known for its hoagies, scrapple, soft pretzels, water ice, Tastykake, and is home to the cheesesteak. Its high-end restaurants include Le Bec-Fin, Four Seasons and Morimoto, among many others.

Philadelphia is one of 13 U.S. cities to have all five major sports: the Philadelphia Eagles of the NFL, the Philadelphia Flyers of the NHL, the Philadelphia Phillies in MLB, the Philadelphia Union soccer franchise, and the Philadelphia 76ers of the NBA. Perhaps the Phillies will be in town for the AUA meeting.

Shopping options in Center City include The Gallery at Market East, the Shops at Liberty Place, Jewelers' Row, South Street, and a variety of standalone independent retailers. Rittenhouse Row, a four-block section of Walnut Street, has higher-end clothing chain stores as well as hipster-inspired clothing stores. The parallel streets of Sansom and Chestnut in this area have some high-end boutiques and clothing retailers. Old City has some emerging boutiques from local, as well as international merchandisers. The Reading Terminal Market includes dozens of take-out restaurants, specialty food vendors, and small grocery store operators, a few of which are operated by Amish farmers from nearby Lancaster County. The Italian Market in South Philadelphia is a major Philadelphian landmark. Philadelphia also has a few eclectic neighborhood shopping districts, usually consisting of a few blocks along a major neighborhood thoroughfare, such as in Manayunk or Chestnut Hill.

**Philadelphia summary adapted from Wikipedia (creative commons license)*

Mark Your Calendar!

May 12-14, 2011

AUA 58th Annual Meeting

Loews Philadelphia Hotel
Philadelphia, Pennsylvania

SAB Report

Metabolomics: Another 'Bionomics' Systems Approach to Evaluate in vivo Function in Health and Disease for Anesthesiologists

Helene Benveniste, M.D., Ph.D.
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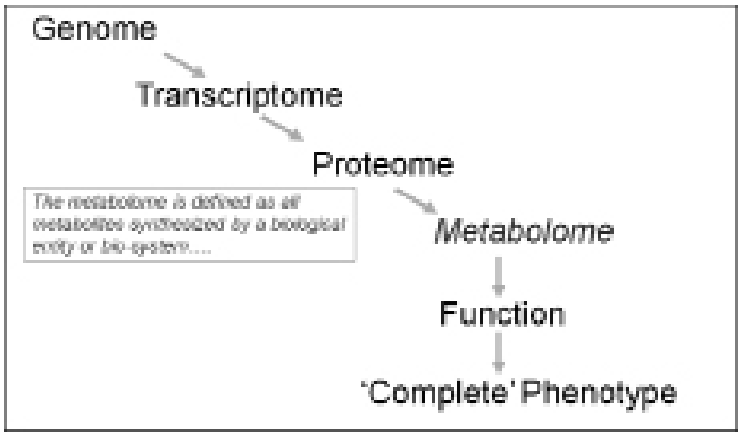
New emerging high-throughput technologies for analysis of genes and proteins have led to the fields of "genomics" and "proteomics," which continue to contribute a wealth of information to our understanding of system function in the live organism. However, genomic and proteomic profiling of any given biosystem is not sufficient to fully understand cellular function because the downstream metabolic status must also be considered to assess the complete functional phenotype.



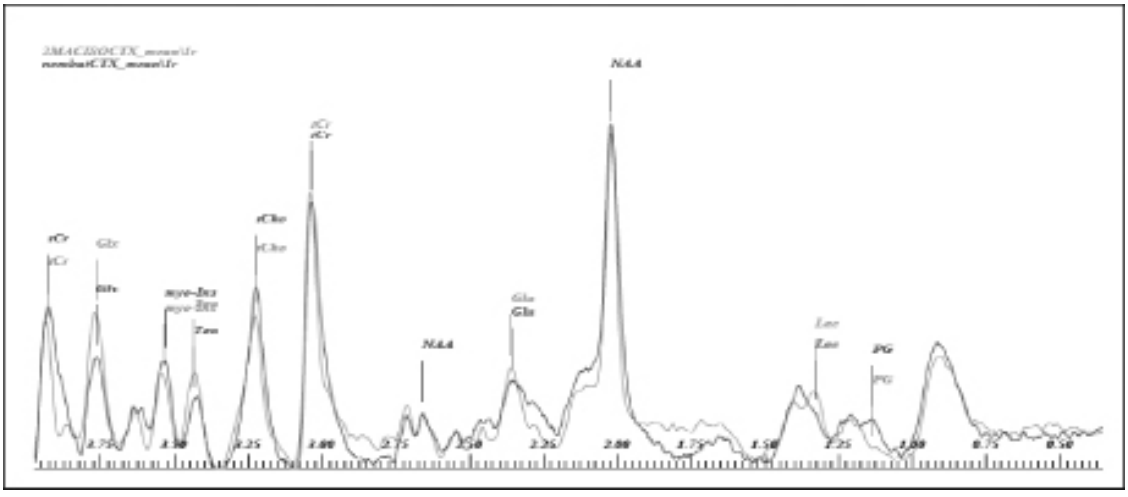
The Field of "Metabolomics":

The study of unique small-molecule metabolite profiles or patterns within biosystems is defined as "metabolomics" and can be extracted using non-invasive technology such as mass spectrometry or nuclear magnetic resonance spectroscopy (NMR). Metabolomic profiling can be applied to spectra obtained *in vitro* (e.g., urine, blood or cerebrospinal fluid) or *in vivo* from the brain using magnetic resonance spectroscopy (^{1}HMRS). The spectral analysis can be performed using targeted analysis (e.g., metabolites with known spectral signatures are targeted) or non-targeted (e.g., multivariate statistical modeling) analysis. The multivariate statistical modeling applied to the spectra is used to 1) visualize differences between spectra from pre-defined experimental groups and 2) determine which particular spectral signatures are responsible for the differences. Metabolomics analysis applied to biofluids such as urine, CSF or serum have provided a wide variety of new information in the fields of toxicology, inborn errors of metabolism, prostate cancer, cardiac disease and brain tumors. For example, a recent study used metabolomics to diagnose the severity coronary artery disease in patients using serum samples[1]. Further, cancer metabolomics has been in focus clinically because it might be used to interpret cellular physiology and biochemical activity in tumors. Thus, in prostate cancer a metabolomics analysis revealed that more than 80 different metabolites differentiated malignant from benign prostate cancer[2].

Helene Benveniste, M.D., Ph.D.

Anesthesia-Related Studies Applying Metabolomic Analysis:

A quick PubMed literature search with key words such as "anesthesia," "metabolomics," "brain," "general anesthesia," "pain" or "analgesia" was unsuccessful in retrieving any relevant literature suggesting that metabolomic analysis has not yet been implemented in large-scale clinical or preclinical anesthesia-pertinent studies. However, there is no doubt in my mind that this trend is about to change, although the experimental infrastructure necessary for conducting such studies accurately is complex and require multidisciplinary expertise. High field magnets for humans (3T or higher) or animals (7T or higher),



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ASA Responds to Health Affairs Article by AANA

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From Table 4 in Dulisse & Cromwell:

MORTALITY	Non Opt Out	Pre Opt Out	Post Opt Out	% Change
MD	1	0.797	0.788	-1.13%
CRNA	0.899	0.651	0.689	5.84%
Team	0.959	0.708	0.565	-20.2%

COMPLICATIONS	Non Opt Out	Pre Opt Out	Post Opt Out	% Change
MD	1	0.824	0.818	-0.73%
CRNA	0.992	0.798	0.813	1.88%
Team	1.067	0.927	0.903	-2.59%

- Cost of care is equivalent under Medicare and Medicare-based payment systems. Characterizing independent CRNA practice as "cost effective" misrepresents the facts.

- The study understates differences in the training of anesthesiologists and nurse anesthetists – nurse anesthetists two years post-baccalaureate, anesthesiologists eight years, including a broad foundation in general medicine, intensive care and pain management.

- Overwhelming public preference for physician supervision of anesthesia care (>75 percent) (Tarrance 2001). Public policy should reflect this preference.

- The study is funded by the American Association of Nurse Anesthetists and, like many prior studies conducted by Dr. Cromwell under contract to AANA, adheres to AANA's public policy agenda.

Anesthesiology has enjoyed enormous success in recent years in media exposure of the role of the anesthesiologist. This coverage has appeared on the most prominent and prestigious outlets in the world, including the *New York Times*, *Wall Street Journal* and CNN, to name a few. We will be unrelenting in promoting the expertise of the anesthesiologist and our rightful place leading perioperative care. Each of us has the opportunity to deliver this message through our actions and through our words with the hundreds of patients for whom we each care annually. Both in the press and at the bedside, we mustn't miss an opportunity to educate and inform the public about the specialty.

Editor's Note:

A *New York Times* editorial on the topic was published Sept 7. It can be viewed at **http://www.nytimes.com/2010/09/07/opinion/07tue3.html?_r = 1&emc = eta1**

SAB Call for Nominations

The AUA Council would like to invite AUA members to nominate another member or apply themselves for service on the Scientific Advisory Board (SAB). The SAB determines the scientific content of the Annual Meeting program and provides input to the AUA Council on issues pertinent to the scientific mission of AUA. SAB has three responsibilities:

1. Grade abstracts for the AUA Annual Meeting and organize accepted abstracts into sessions;
2. Attend the AUA Annual Meeting to help poster and oral discussion sessions and attend the SAB working luncheon for discussion of issues relevant to the SAB; and
3. Contribute a 500- to 1,000-word article to the AUA newsletter once during the three-year term on the SAB. Articles might be short reviews of some recent scientific advance or pertinent topic, a meeting review or an opinion piece.

To nominate a member or to apply for service on the SAB, please e-mail curriculum vitae by **March 1, 2010** to: Marie Csete, M.D., Ph.D., SAB Chair at **mariecsete1@gmail.com**

The AUA Council and the SAB chair will choose two candidates who will then be contacted to confirm their willingness to serve. The three-year term begins after the AUA Annual Meeting in Philadelphia.

SAB Report

Metabolomics: Another 'Bionomics' Systems Approach to Evaluate in vivo Function in Health and Disease for Anesthesiologists

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including high field NMR spectrometers, are needed for reliable and high-quality spectral acquisitions. More important is to create solid collaborations with MR physicists, mathematicians and biostatisticians with expertise in multivariate statistical analysis and metabolomics.

An increasing number of investigators have started to apply ^{1}HMRS to indirectly understand changes in brain metabolism using different anesthetic regimes. The recent work of Du et al.[3] is a good example and used ^{1}HMRS to quantify effects of pentobarbital on cerebral metabolism and brain activity in rats. Interestingly they quantified anesthesia "depth" indirectly by tracing the resonances of propylene glycol, a solvent in the pentobarbital injection solution. Figure 1* shows average 1HMRS spectra (n = 6) acquired in the rodent brain (hippocampus) during pentobarbital anesthesia (30mg/kg i.p) compared to average spectra acquired from seven rats during 1MAC isoflurane anesthesia. Several brain metabolites are apparent including N-Acetyl-Aspartate (NAA), total creatine (tCr), Glutamate (Glu), total choline (tCho), myo-Inositol (myo-Ins), Lactate (Lac) and Taurine (Tau). It is clear that higher levels of lactate (peak resonating at 1.33ppm) characterizes isoflurane anesthesia and that lack of lactate in addition to the spectral signature of propylene glycol (PG) at 1.13ppm characterizes the pentobarbital anesthesia state. Another recent study conducted NMR analysis on brain extracts from rats anesthetized with either propofol or isoflurane and demonstrated clear spectral differences using chemometric analysis.[4] We now have the opportunity to take advantage of the fast-developing hardware and software for metabolomics and to combine this technique with the other "omics" to start exploring, for example, the effects of anesthesia, surgical injury and "inflammation" on gene transcripts and proteins as well as the metabolome.

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EAB Call for Nominations

The AUA Educational Advisory Board (EAB) helps to develop programs for the Annual Meeting. These programs are oriented toward the educational mission of our specialty. The EAB also contributes articles to the AUA newsletter. The full committee meets during the AUA Annual Meeting (May 12-14, 2011 in Philadelphia.).

Committee members are expected to attend the AUA Annual Meeting and the EAB committee meeting as well as actively participate in all committee activities. AUA members who are interested in serving on the EAB, who plan on attending AUA Annual Meetings and who are willing to help undertake the work of the committee are encouraged to submit their names and a brief CV. Alternatively, AUA members can submit the name of another member along with a brief CV. Nomination materials should be sent by **Friday, December 3, 2010** to: Robert E. Shangraw, M.D., Ph.D., EAB Chair at **shangraw@ohsu.edu**.

The AUA Council and the EAB chair will choose three candidates who will then be contacted in the winter to confirm their willingness to serve. The three-year term begins at the 2011 AUA Annual Meeting in Philadelphia.

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