Editor’s Column

Are We Choosing Wisely?

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Every day we are faced with choices. What to wear, what to eat, LMA or ETT, rocuronium or succinylcholine? How many of you are familiar with the “Choosing Wisely” campaign initiative of the American Board of Internal Medicine? One of its goals is to get every specialty in medicine to pick 5 practices to discontinue in medicine because evidence supports the practices are associated with harm. I have chosen the various proposals made by several professional societies that directly apply to the practice of ambulatory anesthesia and highlighted these in Attachment 1, an abbreviated list, at the end of the newsletter.

Interestingly, many of the recommendations made by diverse professional societies apply directly to our patients and our practices. The contribution from the American Society of Anesthesiologists states: “Don’t obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery- specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies…”

I was particularly pleased that women of child-bearing age be offered pregnancy testing rather than be required to test. Patient choice and autonomy have always been fundamental rights protected by laws and professional principles. In many practices preoperative pregnancy testing is required, or women are tested without their knowledge. It is common for women to be routinely asked to provide a urine sample upon arrival to the preoperative area. They are not told about the test or notified of the test results unless positive. Ironically, some women may be interested to learn that they are NOT pregnant.

Similarly, some institutions still have archaic requirements for “routine” testing of patients based on age, type of procedure, or arbitrary durations for previous laboratory results. Not only are these tests a waste of time and money, but they also may lead to patient harm or be considered fraudulent practices. A couple of years ago my mother was scheduled for a cystoscopy to be performed under MAC. She lives in a rural community and no longer drives because of her rheumatoid arthritis. (Though at 90 yrs of age not having a license may be attrib-
uted to other reasons she doesn’t acknowledge.) I was quite dismayed when she told me we had to arrange transportation (about a hundred miles roundtrip) for her to have preoperative testing; several hundred dollars’ worth of blood work and an electrocardiogram in spite of her normal results within the year before her procedure. I decided to call the nursing director of the ambulatory surgicenter to discuss the rationale for this practice. I got nowhere by suggesting the lack of benefit of these required tests to my mother based on various recommendations and the current standard of care. Then I disclosed that I was the director of the Anesthesia Perioperative Medicine Clinic at the University of Chicago and had actually written a textbook on preoperative care. She was not impressed and did not waiver a bit in her mantra, “it is our policy”. When I then suggested that the Center for Medicare and Medicaid Services (CMS) specifically states that testing must be “clinically indicated” to be considered reimbursable, and unless my mother signed an Advanced Beneficiary Directive informing her that CMS would not be required to pay for her tests, testing her could be considered fraudulent practice, she started to see things a bit more clearly.

I hope I have motivated you to re-examine your testing protocols, including the need for “preoperative clearance”. Testing impacts your patients and the healthcare system as a whole. I encourage you to take a few minutes to read Attachment 1, embrace these recommendations, and incorporate them into your practices. The entire document can be found here: http://www.choosingwisely.org/wp-content/uploads/2013/02/Choosing-Wisely-Master-List.pdf.
President’s Message

SAMBA: Serving the Ambulatory Anesthesia Community

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President, SAMBA
CEO & President of Wright State Physicians and Associate Dean for Faculty and Clinical Affairs, Dayton, OH
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“Spring is when you feel like whistling even with a shoe full of slush.”

The days are getting longer as spring approaches, but since the groundhog saw his shadow we are still in the grip of winter. But the orioles are singing more and although we still have overnight lows in the single digits, we are seeing the appearance of sunny days and highs of 60. Daylight saving time means I leave work while the sun is still up (you remember the sun- it’s that great yellow disk in the sky). Digging out of a cold, snowy winter, we can all look forward to the SAMBA annual meeting. I’m looking forward to it for a number of reasons: a return to Baltimore where I spent so much time as a young adult; eating a decent crab cake again; Berger’s cookies; the star-spangled SAMBA social event at the Baltimore Aquarium; a fabulous educational program; and receiving the best title any organization has to offer- “immediate past president”! I’m even looking forward to traveling between Baltimore and Ohio, although I might rail at the road conditions on the turnpike.

Much has happened in SAMBA over the past year. We’ve had a successful change in management companies, a focus on our international partnerships, and growth in numbers at our office-based anesthesia meeting. We have taken the initial steps at repairing the relationship between the subspecialty societies and the ASA. Most significant has been the success of our SCOR project. By the time this message hits the press we will have over 100,000 cases entered in the database. Also, we are generating abstracts and manuscripts that advance our understanding of the science of ambulatory anesthesia. The tireless efforts of the SCOR committee have fueled this success. Our second annual office based anesthesia meeting last fall was another success. The growth in so short a time is impressive. The upcoming OBA meeting for office-based anesthesia this fall will be both educational and fun, so look for it soon. Our educational efforts will continue with the mid-year meeting just before the ASA annual meeting in October. Of course, the crown jewel in SAMBA’s educational Triple Crown is this year’s annual meeting in Baltimore. Just a hop, skip, and a jump from Washington, the meeting will be a monument to the hard work of the Meeting Committee. SAMBA remains financially strong. The Budget and Finance Committee is steering us through turbulent financial waters to a safe inner harbor so that we can fund SCOR and research awards.

SAMBA relies so much on the donated time and effort of its members. We tend to think of the officers and the committee members as the primary volunteers, but our general membership is crucial, too. Everything from simple attendance at meetings and visiting exhibits to advocating for your group to participate in SCOR to filling out meeting evaluations requires effort and commitment. The members enhance the strength of SAMBA and the quality of our programs. As ambulatory and office-based anesthesia continue their growth in market share there is an ever-increasing need for organizations such as SAMBA to lead the way with education and networking opportunities. I exhort you to encourage colleagues, residents, and students to become involved in what is clearly the future of modern anesthesia practice. Join SAMBA, participate in SCOR, and get your buddies to do the same! The domino effects of your participation – no sugar coating needed- will encourage others to sign up. Don't give SAMBA a wide berth; a muscle-in is not needed; just let us know you are interested.

So, as you finish reading this message, think back and try to identify as many references to Mob Town as you can. Some glare at you like a neon sign (like the word Baltimore), but others are more subtle. Take a shot and tower over your colleagues in glory if you find more than they do. If you get a headache from searching for the references, you can clock in for a cure at Eutaw and Lombard downtown.

See you in Charm City, Hon!
The SAMBA Distinguished Service Award (DSA) is the highest honor our Society can bestow upon an individual for exceptional service to ambulatory anesthesia. The Committee on Awards considers nominations from members and presents a name to the Board of Directors for a vote. Past DSA recipients include individuals who have dedicated their careers to the advancement of the specialty. This year’s recipient is no exception. Dr. Paulo Lemos was selected and unanimously approved by the SAMBA Board of Directors to receive the 2014 SAMBA Distinguished Service Award in recognition of his outstanding service to ambulatory anesthesia and for promoting anesthesiologists as leaders in the health care field. The award will be presented on Friday, April 25, 2014, during the SAMBA annual meeting in Baltimore. Incidentally, this is the first time the prestigious award is being given to a person whose training or practice has not been in the United States or Canada.

Dr. Lemos’ interest and influence on the development of ambulatory anesthesia and surgery in Portugal and throughout Europe was evident early in his career. He has been the president of the Portuguese Association for Ambulatory Surgery (APCA) since its founding in 1998 and was nominated by the Portuguese Health Ministry to the Executive Committee of the National Commission for the Development of Day Surgery in Portugal. He has served as president of six National Congresses of Ambulatory Surgery organized by the APCA and has served two terms as the Portuguese representative to the European Society of Anesthesiologists’ Council. He is the current president of the Anesthetic College of the Portuguese Medical Association.

As an anesthesiologist-leader of ambulatory surgery in Europe, Dr. Lemos has been a great supporter of the role of SAMBA in the International Association for Ambulatory Surgery (IAAS). In that organization, which includes surgeons, anesthesiologists, nurses and administrators, he has served as a member of the General Assembly since April 1999 and member of the Executive Committee since April 2001. He was the IAAS president from 2009 to 2011. He serves as a national project leader, representing Portuguese institutions (CHP, and Administração Regional de Saúde do Norte) in two IAAS European projects: Day Surgery Data Project and Improving Patient Safety of Hospital Care Through Day Surgery (Day safe Project).

Dr. Lemos is a prolific author and editor in the field of ambulatory anesthesia and surgery. He has written more than 60 papers published in national and international journals and four book chapters. He was editor-in-chief of the IAAS Newsletter from 2009 to 2011 and was the senior editor of the first International edition of the book: *Day Surgery: Development and Practice*.

Dr. Lemos has been a great supporter of the role of SAMBA in the International Association for Ambulatory Surgery (IAAS).

Dr. Lemos is a sought after speaker and educator in the fields of ambulatory anesthesia and surgery. He has lectured at more than 60 national congresses and in more than 30 international meetings of anesthesia, intensive care, and ambulatory surgery all over the world. He continues to promote the importance of anesthesiology in the development of ambulatory surgery in European countries where the practice is less developed. He is currently one of very few anesthesiologists who teach the popular Train the Trainers courses created by IAAS.

Dr. Paulo Alexandre Magalhães Ferreira de Lemos is a Portuguese native. He was born and educated in the beautiful city of Porto where he also earned a medical degree from Porto University. His anesthesiology training was completed at Hospital General Santo António and included a 4-month rotation at King’s College Hospital in London. He is currently a consultant and clinical chief of anesthesiology at the Centro Hospitalar do Porto (CHP). Besides being the head of the Ambulatory Surgery Centre, he is responsible for the anesthesiology clinics, the post-anesthesia care units and the anesthesia unit at the Pediatric-Maternity Hospital.

Dr. Lemos continues to promote the importance of anesthesiology in the development of ambulatory surgery in European countries and beyond.

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Continued on next page (5) ...
and has participated in three national courses so far in Hungary, Romania, and Serbia.

In his free time, Dr. Lemos enjoys travelling and horseback riding with his wife Silvia and two grownup sons Filipe and Pedro.

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**Editor's Note:** Members are invited to submit nominations for the DSA award. For a nominating form, please contact the Committee on Awards via email at info@sambahq.org, or by phone at (312) 321-6872. Nominations must include a cover letter, a copy of the nominee's curriculum vitae and no more than four letters of support of the nomination.

Distinguished Service Award Past Recipients (1994-2013) are: (*Deceased)
- Marie-Louise Levy, M.D.
- Bernard V. Wetchler, M.D.
- Stanley Bresticker, M.D.*
- Harry C. Wong, M.D.
- Burton S. Epstein, M.D.
- Surinder K. Kallar, M.D.
- Wallace A. Reed, M.D.*
- Paul F. White, M.D., Ph.D.
- Herbert D. Weintraub, M.D.*
- Raafat S. Hannallah, M.D.
- Beverly K. Philip, M.D.
- Rebecca S. Twersky, M.D.
- Ervin Moss, M.D.
- Jeffrey L. Apfelbaum, M.D.
- Frances Chung, M.D.
- Lucinda L. Everett, M.D.
- Barbara S. Gold, M.D.
- Kari T. Korttila, M.D.
- Kathryn E. McGoldrick, M.D.

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**In Memoriam:**

**Dr. Wallace Reed**

Inspired by a vision to provide better and more cost-effective care, Dr. “Wally” Reed co-founded the first freestanding ambulatory surgical facility, the Phoenix Surgicenter® in 1970.

Dr. Reed served on SAMBA’s first Board of Directors. Dr. Reed was also a SAMBA DSA recipient. He died on March 7 at the age of 97.

View Dr. Wallace Reed’s Obituary by The Arizona Republic:

[http://www.legacy.com/obituaries/azcentral/obituary.aspx](http://www.legacy.com/obituaries/azcentral/obituary.aspx)
For more information please

Click here to learn more about SCOR: the SAMBA Clinical Outcomes Registry

or contact SCOR at (855) 770-SCOR (7267)

or visit www.SCORDATA.org

or email SCOR at info@SAMBASCOR.org.
Guidelines to help office-based surgery facilities develop an emergency plan for transferring patients with suspected malignant hyperthermia (MH) have been developed. The guidelines are intended for facilities that are not capable of providing extended tertiary care for such patients, and will therefore depend on a separate receiving healthcare facility to do so. They are also separate and distinct from the diagnostic treatment guidelines for MH, which are already published by the Malignant Hyperthermia Association of the United States (MHAUS).

The guidelines cite four (4) suggested steps for the transfer of patients from office-based surgery facilities. Steps one (1) and two (2) cite the recognition of a suspected episode of MH, discontinuation of triggering agents, and initiation of treatment as per MHAUS guidelines previously mentioned. Such guidelines involve MHAUS’s “Emergency Therapy for MH” protocol criteria (see www.mhaus.org) or clinical signs such as elevated endotracheal CO2, muscle rigidity, hyperthermia, or exposure to triggering agents. Steps three (3) and four (4) cite implementation of the emergent MH transfer plan (after reviewing transfer considerations and capabilities) and notification to the receiving healthcare facility. With respect to receiving healthcare facilities, existing transfer agreements, inpatient capabilities, and consultants potentially available should be reviewed. Data to be reported (see summary of Emergent Transfer Care Plan Checklist below) as well as transport team capabilities should be reviewed. Implementation of the transfer decision emphasizes that transfer of such patients should not be optional and coordination of communication is essential.

The Emergent Transfer Care Plan Checklist was also developed in conjunction with the guidelines above, as a potential format to document pre-transfer events and their implementation times. The checklist details considerations during the recognition of the MH episode, transport team information, treatment, data to be collected, personnel to communicate with, and other pertinent information to be documented.

Both guidelines are the result of a collaborative effort launched by the Society of Ambulatory Anesthesia (SAMBA) and MHAUS. The guidelines, in summary, help office-based surgery facilities ensure they have a comprehensive plan in place to transfer suspected MH patients and to take into account the resources and capabilities available to them. Such an evaluation of processes will likely uncover potential pitfalls which may lead to a lessened chance of survival by these patients.

For more information, visit www.MHAUS.org and/or www.sambahq.org

References:
1. “Developing an Emergent Transfer Care Plan for Suspected Malignant Hyperthermia”. Copyright SAMBA and MHAUS. 2012
2. “Emergent Transfer Care Plan Checklist”. Copyright SAMBA and MHAUS. 2012
Ophthalmic Anesthesia

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Ophthalmologic procedures represent a sizable proportion of all surgical operations performed worldwide. In the United States alone, more than two million cataract lenses are extracted and replaced annually, number certain to increase as our population ages. Although cataract surgery makes up the majority of eye procedures performed in ambulatory private practice settings, a variety of other ophthalmologic procedures are performed. Among them are corneal transplant and vitreoretinal, glaucoma, strabismus, tumor, oculoplastic, orbital, and eye trauma procedures.

Most anesthesiologists only provide monitored anesthesia care for patients undergoing ophthalmic surgery, letting an ophthalmologist perform a regional anesthetic when necessary. This may be a result of the fact that less than 25% of anesthesiology residency programs offer exposure to, much less training in, ophthalmic regional anesthesia.1 Ophthalmologists were among the first surgeons to shift from a hospital operating room suite to ambulatory surgery facilities and then, later, to specialty eye-care surgery centers. Many hospital-based anesthesiology residency training programs do not offer residents exposure to eye surgery. In private practice, anesthesiologists may balk at acquiring skills in ophthalmic anesthesia procedures because of a perceived increased risk of eye injury to patients during training in new techniques. Two papers published in the 1990’s described multiple examples of patients suffering permanent visual loss after ophthalmic blocks by anesthesiologists who lacked training for such blocks.2,3 It is therefore not surprising that eye block misadventures represent a sizable fraction of closed claims MAC cases.4,5 The rationalization that no additional fees are generated to compensate for anesthesiologist-rendered blocks and the enhanced risk are another factor. This logic ignores the fact that anesthesiologists are the most knowledgeable and skilled specialists in all other areas of regional anesthesia and local anesthetics. Decades ago, obstetricians would administer an intrathecal block before commencing a cesarean section on patients. That era has long past.

Anesthesiologist-rendered ophthalmic anesthesia creates efficiencies when patients are anesthetized and immediately ready for surgery as soon as (or before) the conclusion of a previous eye surgery case. Anesthesiologists tend to perform peribulbar eye blocks that may have fewer untoward sequelae than traditional retrobulbar blocks. Peribulbar blocks have a long latency of onset, a disadvantage for an ophthalmologist performing blocks between cases. This variable is less significant when an anesthesiologist can place the block well in advance of an anticipated surgery while an ophthalmologist is in the operating room with another patient. Many ophthalmologists and ambulatory surgery center administrators advocate anesthesiologist-provided blocks to diminish turnover time, to offer excellent operating ophthalmic akinesia/analgesia and to have more cases performed per room per day, thus enhancing operating room efficiency.

Acquisition of ophthalmic anesthesia skills for trainees is becoming less likely because of the dwindling
number of eye cases performed in a hospital setting and because of the shift to topical anesthesia for most cataract procedures. Thus, ophthalmology residents have less experience with ophthalmic regional anesthesia techniques. Ophthalmic procedures are considered to be low-risk; however, many eye surgery patients are at the extremes of age and have attendant health issues that may place them at greater risk from general anesthesia than younger patients. Surgical and anesthetic outcomes may be compromised if neither the anesthesiologist nor the ophthalmologist are adept at regional eye anesthesia techniques.

Reference:

How We Do It:
SAMBA’s OSA Consensus Statement in Practice at a Busy Outpatient Surgery Center

Katie Reyes, MD, Christopher Arndt, MD, and Tim Petersen, PhD

University of New Mexico, School of Medicine
KReyes@salud.unm.edu, carndt@salud.unm.edu, TimPetersen@salud.unm.edu

Patients with obstructive sleep apnea (OSA) present special challenges to the anesthesiologist in the ambulatory setting due to their increased risk of perioperative complications. To complicate matters, a significant proportion of OSA patients remain undiagnosed when they present for surgery. Outpatient centers may lack a coordinated effort to avoid same-day cancellations and unanticipated admissions due to OSA, as ours once did. Over the past year, we have embraced SAMBA’s consensus statement on OSA screening and demonstrate how we applied it to local practice at our busy academic outpatient surgery center.

Unlike patients scheduled for surgery at our main university hospital, patients at the free-standing outpatient surgery center are not seen at a pre-anesthesia clinic. A nurse screens about 95% of outpatients preoperatively over the phone. These five to six thousand cases scheduled per year are generally “fast-tracked” and discharged home after surgery. If cause for unanticipated admission to the main hospital occurs, the patient must be transferred by ambulance, incurring a substantial unexpected cost as well as a burden to patients, family and staff. Prior to implementation of our project, there was no coordinated effort to avoid same-day cancellations and unanticipated admissions due to OSA.

The Anesthesiologists Task Force on perioperative management of patients with obstructive sleep apnea has published Practice Guidelines for the perioperative management of obstructive sleep apnea. Following these guidelines and published recommendations to develop a practical algorithm based on current best evidence and expert opinion, we developed a nurse phone questionnaire for adult patients scheduled for outpatient surgery using the 2012 SAMBA consensus statement as a framework.

When designing our algorithm, we wanted to incorporate screening for comorbid conditions that put OSA patients at higher risk of perioperative complications. Based on the limited available literature, patients with a known diagnosis of OSA and optimized comorbid conditions can be considered for ambulatory surgery if they are able to use a continuous positive airway pressure device in the postoperative period. We ask patients to bring their CPAP machine with them on the day of surgery as it may be used in the immediate post-operative period. A specific OSA discharge instruction sheet is provided to OSA patients and family. It is shown below.

To screen for the patients with undiagnosed OSA in our algorithm, we chose to incorporate the STOP-BANG scoring model as recommended in the SAMBA statement. We chose a minimum score of 5 so as to improve specificity and identify patients at higher risk for severe OSA. Our phone-based screening algorithm was revised several times and tested by select preoperative nurses for usability. It is shown below.

We then launched a series of interventions to standardize and validate the screening process for OSA at our outpatient facility. We distributed several binders containing our OSA screening tools and relevant literature to our preoperative nurses and midlevel practitioners at our outpatient facility and at our main hospital pre-anesthesia clinic. We held thirty-minute training meetings to educate pertinent staff regarding the planned interventions.

The perioperative nursing staff quickly accepted the new algorithm and successfully added it to their preoperative checklist. Each completed form is labeled and placed in the patient chart as part of the permanent medical record. The phone-based screening algorithm is now incorporated into the electronic medical record. Patients found to be at risk for OSA may be directed to UNM’s main hospital for overnight monitoring for elective surgery, prior to

Continued on next page (11) ...
arriving on the day of surgery, thus preventing day-of-surgery cancellations.

To test the effectiveness of our screening protocol, we administered surveys that recorded the screening effectiveness of the preoperative nurses prior to implementation of the algorithm. This survey tracked responses by nurses regarding the frequency of their verbal screening for different characteristics on the STOP-BANG questionnaire.

We then administered follow-up surveys two months after implementation of the interventions. Overall, these surveys demonstrated improved preoperative screening for OSA at our outpatient facility. Pre-intervention, 0% of nurses reported always screening for daytime sleepiness or apneic episodes and post-intervention, 37.5% reported always screening for these characteristics. There was also reported improved screening of loud snoring, BMI > 35, and neck circumference. However, many nurses noted on the initial surveys that they routinely screened for BMI >40, which was the previous standard at our facility.

We believe that the sensitivity of screening for patients with OSA has also increased, because the percentage of nurses that reported notifying an anesthesiologist or surgeon of a patient’s risk factors for OSA >10 times per year went from 0% pre-intervention to 50% post-intervention.

In conclusion, our outpatient facility previously lacked proper preoperative screening for OSA and our nurse surveys show that the implementation of our questionnaire has led to more consistent preoperative screening. With the ultimate goal of reducing postoperative complications and costs associated with known and unknown OSA patients in the outpatient setting, we hope to share our algorithm with other centers.

See Pages 12 & 13 for "Patient Instructions" and "Nurse Screening" Forms

References


Recovering from Surgery
When You Have Sleep Apnea

You were given some medicines during your surgery that make you sleepy. Since you have sleep apnea, this could make you more likely to have breathing problems after surgery. So there are some important things you need to do while you recover from surgery.

- Don’t sleep flat on your back. Try sleeping on your side or in a chair. Or prop yourself up with pillows.
- Don’t use alcohol or smoke.
- Don’t take medicine that makes you sleepy (unless your doctor prescribed it).
- If you need more medicine for pain or nausea, be sure to tell your surgeon that you have sleep apnea. And ask for advice on what medicines are safe for you to take.

If you have a CPAP (breathing machine):
- For the first 24 hours, you need a responsible adult to watch over you. They will need to make sure that you use your CPAP. They should also check its pressure while you sleep.
- For the next 5 days, use your CPAP while sitting or sleeping. After that, just use it while you sleep.
- Use your CPAP if you will be resting or sitting after taking pain medicine.
- Follow your CPAP’s care instructions. Use the settings your doctor asked you to.

If you have a mouth guard (dental device):
For the first 24 hours, use your mouth guard at all times except when you’re eating. After that, just use it while you’re sleeping.

Other instructions:

I have been given a copy of these instructions. All of my questions have been answered.

______________________________
Patient/Guardian Signature Date

______________________________
RN Signature Date

Call your surgeon right away if you have any problems.
If it’s really bad, call 911 or go to the emergency room.

If you feel too sick to use your CPAP, like you might throw up, please call your surgeon.

PFDC Approved 1/14
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<td><strong>Instructed to bring CPAP</strong></td>
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<td>Do you use a CPAP machine?</td>
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<td>Home O2? How many liters? _____liters/min.</td>
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<td><strong>S</strong></td>
<td>Do you <strong>SNORE</strong> loudly enough to be heard through a closed door?</td>
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<td><strong>T</strong></td>
<td>Do you feel <strong>TIRED</strong> or fatigued during the daytime almost every day?</td>
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<td><strong>O</strong></td>
<td>Has anyone <strong>OBSERVED</strong> that you stop breathing during your sleep?</td>
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<td><strong>P</strong></td>
<td>Do you have a history of high blood <strong>PRESSURE</strong> with or without treatment?</td>
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<td><strong>Body Mass Index</strong> greater that 35kg/m2. <strong>BMI</strong> _____</td>
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<td>Ht.In.<strong><strong>x2.54 =Ht. _____cm Wt. lbs.</strong></strong>___÷2.2=Wt. _____kg</td>
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<td><strong>N</strong></td>
<td><strong>NECK</strong> circumference greater than 40cm_____ (neck size on shirt 16 or higher)*</td>
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<td>Shirt size large_____ extra-large____</td>
<td>Neck circumference In.____x2.2=_____cm</td>
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<td><strong>G</strong></td>
<td><strong>Male GENDER</strong></td>
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<td><strong>STOP BANG Score Total</strong>*(1 point for each)” yes “on lines S though G only)</td>
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<td><strong>Anesthesia Care Provider notified of STOP-BANG Score of 5 or more</strong></td>
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<td>Do you take opiates on a regular basis for pain?</td>
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<td>Are you diabetic?</td>
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<td>Did the patient bring his/her CPAP?</td>
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<td>Did the patient wear his/her CPAP in PACU?</td>
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<td>Did the patient receive post anesthesia OSA instructions?</td>
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SAVE THE DATES!

Upcoming SAMBA Educational Meetings

**Office-Based Anesthesia: Nuts and Bolts**

An annual meeting sponsored by the ASDA and SAMBA
Saturday, September 13, 2014
Gaylord Opryland
Nashville, Tennessee

**Mid Year Meeting**

Held in conjunction with ASA Anesthesiology 2014 Meeting
Friday, October 10, 2014
New Orleans, Louisiana

Make your plans now to join your colleagues for these educational and networking sessions. Additional program and registration information will be available at www.SAMBAHQ.org later this spring!
Contact us at SAMBA!

Do you have questions for a member of SAMBA’s staff? Please see the directory below. If you would like to email your question, please send it to SAMBA@asahq.org. Note: we get many questions about the practice of outpatient anesthesia; we can only answer those questions if you are a member of SAMBA. Why not join now? Go to membership page.

<table>
<thead>
<tr>
<th>Membership Questions</th>
<th>Corporate Sponsorships/Exhibits</th>
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<td>John Enright</td>
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<td><a href="mailto:jenright@tradeshownlogistics.com">jenright@tradeshownlogistics.com</a></td>
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<td>(847) 825-5586 ext 134</td>
<td>(770) 432-8410 ext 107</td>
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<td><strong>General questions:</strong></td>
<td><strong>All other SAMBA administrative questions:</strong></td>
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Newsletter Layout and Format:
Scott Springman, MD
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Don’t obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery – specifically complete blood count, basic or comprehensive metabolic panel, coagulation studies when blood loss (or fluid shifts) is/are expected to be minimal.

Performing routine laboratory tests in patients who are otherwise healthy is of little value in detecting disease. Evidence suggests that a targeted history and physical exam should determine whether pre-procedure laboratory studies should be obtained. The current recommendation from the 2003 ASA amendment that all female patients of childbearing age be offered pregnancy testing rather than required to undergo testing has provided individual physicians and hospitals the opportunity to set their own practices and policies relating to preoperative pregnancy testing. Some institutions respect the right of a patient to refuse testing after a thorough explanation of the anesthetic risks during pregnancy and the required signing of a waiver. The avoidance of the routine administration of the pregnancy test was therefore excluded from our Top 5 preoperative recommendations.

The risk specifically related to the surgical procedure could however modify the above preoperative recommendation to obtain laboratory studies and when the need arises; the decision to implement should include a joint decision between the anesthesiologists and surgeons. This should be applicable to all outpatient surgery.

Don’t obtain baseline diagnostic cardiac testing (trans-thoracic/ esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g., CAD, valvular disease) undergoing low or moderate risk non-cardiac surgery.

Advances in cardiovascular medical management, particularly the introduction of perioperative beta-blockade and improvements in surgical and anesthetic techniques, have significantly decreased operative morbidity and mortality rates in noncardiac surgery. Surgical outcomes continue to improve causing the mortality rate of major surgeries to be low and the need for revascularization minimal. Consequently, the role of preoperative cardiac stress testing has been reduced to the identification of extremely high-risk patients, for instance, those with significant left main disease for which preoperative revascularization would be beneficial regardless of the impending procedure. In other words, testing may be appropriate if the results would change management prior to surgery, could change the decision of the patient to undergo surgery, or change the type of procedure that the surgeon will perform.

Don’t use pulmonary artery catheters (PACs) routinely for cardiac surgery in patients with a low risk of hemodynamic complications (especially with the concomitant use of alternative diagnostic tools (e.g., TEE).

The increased risk of hemodynamic complications as indicated above is defined as a patient with clinical evidence of significant cardiovascular disease; pulmonary dysfunction, hypoxia, renal insufficiency or other conditions associated with hemodynamic instability (e.g., advanced age, endocrine disorders, sepsis, trauma, burns).

The use of a PAC during cardiac surgery has been associated with increased mortality and a higher risk of severe end-organ complications. There is clear consensus in the literature that the use of a PAC cannot be recommended as a matter of routine, but for a definite role in a very select group of patients undergoing cardiac surgery. According to a survey by practicing anesthesiologists, the use of PAC could be recommended for specific indications in cardiac surgery including coronary artery bypass grafting (CABG) with poor left ventricular (LV) function, LV aneurysmectomy, recent myocardial infarction, pulmonary hypertension, diastolic dysfunction, acute ventricular septal rupture and insertion of left ventricular assist device. The appropriate indications remain debatable. However, although the PAC has no role in routine perioperative care, the existence of a specific subgroup for which the use of this device may be beneficial cannot be excluded.
Don’t administer packed red blood cells (PRBCs) in a young healthy patient without ongoing blood loss and hemoglobin of \( \geq 6 \) g/dL unless symptomatic or hemodynamically unstable.

The hemoglobin transfusion threshold used in multiple studies has varied from 6.0 to 10.0 g/dL. The optimal hemoglobin/hematocrit criterion for transfusion remains controversial in several clinical settings. Nevertheless, compared with higher hemoglobin thresholds, a lower hemoglobin threshold is associated with fewer red blood cell units transfused without adverse associations with mortality, cardiac morbidity, functional recovery or length of hospital stay. Hospital mortality remains lower in patients randomized to a lower hemoglobin threshold for transfusion versus those randomized to a higher hemoglobin threshold.

The decision to transfuse should be based on a combination of both clinical and hemodynamic parameters.

Don’t routinely administer colloid (dextrans, hydroxylethyl starches, albumin) for volume resuscitation without appropriate indications.

There is no evidence from multiple randomized controlled trials and recent reviews/meta-analyses that resuscitation with colloids reduces the risk of death compared to crystalloids. Colloids offer no survival benefit and are considerably more expensive than crystalloids; their continued routine use in clinical practice should therefore be questioned. Recent perioperative data on the use of colloids in certain populations remain controversial; nevertheless, there is consensus on the avoidance of the routine use of colloids for volume resuscitation in the general surgical population given the overwhelming amount of evidence in the literature of possible harm when used in un-indicated patients. Health care providers should refer to the current evolving literature when faced with specific conditions like sepsis, traumatic brain injury, acute renal injury and burns thereby creating a forum for discussion among the care providers of the efficacy of such a treatment in that individual patient.

Nevertheless, it is important to note that the endpoint in most studies is mortality and morbidity. There is insufficient data to adequately address the need of colloids over crystalloids for other endpoints of interest like hypotension, need for blood transfusion, length of hospital stay, etc. Further research may be required to delineate the existence of any particular benefits of colloids over crystalloids.
Don’t perform preoperative medical tests for eye surgery unless there are specific medical indications.

For many, preoperative tests are not necessary because eye surgeries are not lengthy and don’t pose serious risks. An EKG should be ordered if patients have heart disease. A blood glucose test should be ordered if patients have diabetes. A potassium test should be ordered if patients are on diuretics. In general, patients scheduled for surgery do not need medical tests unless the history or physical exam indicates the need for a test, e.g., the existence of conditions noted above. Institutional policies should consider these issues.

Don’t routinely order imaging tests for patients without symptoms or signs of significant eye disease.

If patients do not have symptoms or signs of significant disease pathology, then clinical imaging tests are not generally needed because a comprehensive history and physical examination will usually reveal if eye disease is present or is getting worse. Examples of routine imaging include: visual-field testing; optical coherence tomography (OCT) testing; retinal imaging of patients with diabetes; and neuroimaging or fundus photography. If symptoms or signs of disease are present, then imaging tests may be needed to evaluate further and to help in treatment planning.

Don’t order antibiotics for adenoviral conjunctivitis (pink eye).

Adenoviral conjunctivitis and bacterial conjunctivitis are different forms of infection that can be diagnosed by the ophthalmologist by clinical signs and symptoms, and if needed, by cultures. Antibiotics are useful for patients with bacterial conjunctivitis, particularly those with moderate to severe bacterial conjunctivitis. However, they are not useful for adenoviral conjunctivitis, and the overuse of antibiotics can lead to the emergence of bacteria that don’t respond readily to available treatments. In cases of diagnostic uncertainty, patients may be followed closely to see if their condition resolves on its own, or if further treatment is required.

Don’t routinely provide antibiotics before or after intravitreal injections.

The routine use of antibiotics before or after intravitreal injections is unnecessary because research has shown that topical antibiotics don’t prevent the occurrence of eye infection. The risks of antibiotic eye drops include allergic reactions. The overuse and repeated exposure to antibiotics can lead to the emergence of bacteria that don’t respond readily to available treatments. Routine antisepsis is appropriate and important for prevention of eye infection.

Don’t place punctal plugs for mild dry eye before trying other medical treatments.

Medical treatments to address dry eye are available, such as artificial tears, lubrication and hot, moist compresses. These medical methods, as well as ways to modify the environment, should be tried first to improve dry eye and normalize the tear film before using punctal plugs. If the patient’s tear film and eyelids have been treated and dry eye symptoms persist, then punctal plugs can be added.

These items are provided solely for informational purposes and are not intended as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their ophthalmologist.
Don’t perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.

Asymptomatic, low-risk patients account for up to 45 percent of unnecessary “screening.” Testing should be performed only when the following findings are present: diabetes in patients older than 40-years-old; peripheral arterial disease; or greater than 2 percent yearly risk for coronary heart disease events.

Don’t perform annual stress cardiac imaging or advanced non-invasive imaging as part of routine follow-up in asymptomatic patients.

Performing stress cardiac imaging or advanced non-invasive imaging in patients without symptoms on a serial or scheduled pattern (e.g., every one to two years or at a heart procedure anniversary) rarely results in any meaningful change in patient management. This practice may, in fact, lead to unnecessary invasive procedures and excess radiation exposure without any proven impact on patients’ outcomes. An exception to this rule would be for patients more than five years after a bypass operation.

Don’t perform stress cardiac imaging or advanced non-invasive imaging as a pre-operative assessment in patients scheduled to undergo low-risk non-cardiac surgery.

Non-invasive testing is not useful for patients undergoing low-risk non-cardiac surgery (e.g., cataract removal). These types of tests do not change the patient’s clinical management or outcomes and will result in increased costs.

Don’t perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.

Patients with native valve disease usually have years without symptoms before the onset of deterioration. An echocardiogram is not recommended yearly unless there is a change in clinical status.

Don’t perform stenting of non-culprit lesions during percutaneous coronary intervention (PCI) for uncomplicated hemodynamically stable ST-segment elevation myocardial infarction (STEMI).

Stent placement in a noninfarct artery during primary PCI for STEMI in a hemodynamically stable patient may lead to increased mortality and complications. While potentially beneficial in patients with hemodynamic compromise, intervention beyond the culprit lesion during primary PCI has not demonstrated benefit in clinical trials to date.

These items are provided solely for informational purposes and are not intended as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their physician.
1. Don’t obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.
   
   In asymptomatic individuals at low risk for coronary heart disease (10-year risk <10%) screening for coronary heart disease with exercise electrocardiography does not improve patient outcomes.

2. Don’t obtain imaging studies in patients with non-specific low back pain.
   
   In patients with back pain that cannot be attributed to a specific disease or spinal abnormality following a history and physical examination (e.g., non-specific low back pain), imaging with plain radiography, computed tomography (CT) scan, or magnetic resonance imaging (MRI) does not improve patient outcomes.

3. In the evaluation of simple syncope and a normal neurological examination, don’t obtain brain imaging studies (CT or MRI).
   
   In patients with witnessed syncope but with no suggestion of seizure and no report of other neurologic symptoms or signs, the likelihood of a central nervous system (CNS) cause of the event is extremely low and patient outcomes are not improved with brain imaging studies.

4. In patients with low pretest probability of venous thromboembolism (VTE), obtain a high-sensitive D-dimer measurement as the initial diagnostic test; don’t obtain imaging studies as the initial diagnostic test.
   
   In patients with low pretest probability of VTE as defined by the Wells prediction rules, a negative high-sensitivity D-dimer measurement effectively excludes VTE and the need for further imaging studies.

5. Don’t obtain preoperative chest radiography in the absence of a clinical suspicion for intrathoracic pathology.
   
   In the absence of cardiopulmonary symptoms, preoperative chest radiography rarely provides any meaningful changes in management or improved patient outcomes.

These items are provided solely for informational purposes and are not intended as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their physician.
1. Don’t perform axillary lymph node dissection for clinical stages I and II breast cancer with clinically negative lymph nodes without attempting sentinel node biopsy.

Sentinel node biopsy is proven effective at staging the axilla for positive lymph nodes and is proven to have fewer short and long term side effects, and in particular is associated with a markedly lower risk of lymphedema (permanent arm swelling).

When the sentinel lymph node(s) are negative for cancer, no axillary dissection should be performed.

When one or two sentinel nodes are involved with cancer that is not extensive in the node, the patient received breast conserving surgery and is planning to receive whole breast radiation and stage appropriate systemic therapy, axillary node dissection should not be performed.

2. Avoid the routine use of “whole-body” diagnostic computed tomography (CT) scanning in patients with minor or single system trauma.

Aggressive use of “whole-body” CT scanning improves early diagnosis of injury and may even positively impact survival in polytrauma patients. However, the significance of radiation exposure as well as costs associated with these studies must be considered, especially in patients with low energy mechanisms of injury and absent physical examination findings consistent with major trauma.

3. Avoid colorectal cancer screening tests on asymptomatic patients with a life expectancy of less than 10 years and no family or personal history of colorectal neoplasia.

Screening for colorectal cancer has been shown to reduce the mortality associated with this common disease; colonoscopy provides the opportunity to detect and remove adenomatous polyps, the precursor lesion to many cancers, thereby reducing the incidence of the disease later in life.

However, screening and surveillance modalities are inappropriate when the risks exceed the benefit.

The risk of colonoscopy increases with increasing age and comorbidities.

The risk/benefit ratio of colorectal cancer screening or surveillance for any patient should be individualized based on the results of previous screening examinations, family history, predicted risk of the intervention, life expectancy and patient preference.

4. Avoid admission or preoperative chest X rays for ambulatory patients with unremarkable history and physical exam.

Performing routine admission or preoperative chest X rays is not recommended for ambulatory patients without specific reasons suggested by the history and/or physical examination findings. Only 2 percent of such images lead to a change in management. Obtaining a chest radiograph is reasonable if acute cardiopulmonary disease is suspected or there is a history of chronic stable cardiopulmonary diseases in patients older than age 70 who have not had chest radiography within six months.

5. Don’t do computed tomography (CT) for the evaluation of suspected appendicitis in children until after ultrasound has been considered as an option.

Although CT is accurate in the evaluation of suspected appendicitis in the pediatric population, ultrasound is the preferred initial consideration for imaging examination in children. If the results of the ultrasound exam are equivocal, it may be followed by CT. This approach is cost-effective, reduces potential radiation risks and has excellent accuracy, with reported sensitivity and specificity of 94 percent in experienced hands. Recognizing that expertise may vary, strategies including improving diagnostic expertise in community based ultrasound and the development of evidence-based clinical decision rules are realistic goals in improving diagnosis without the use of CT scan.
How This List Was Created

The list started as an academic project of Onyi C. Onuoha, M.D., M.P.H. A review of the literature and practice guidelines as approved by the American Society of Anesthesiologists (ASA) was performed to identify an evidence-based list of activities to question within the field of anesthesia. A multi-step survey of anesthesiologists in both the academic and private sector and ASA Committees of Jurisdiction was performed to generate a "Top 5 List" of preoperative and intraoperative activities. The final list was endorsed by the ASA and accepted for the Choosing Wisely® campaign. We believe that developing strategies whereby all stakeholders in the perioperative team are involved in the implementation is a means in which anesthesiologists could be engaged in the efforts to reduce over-utilization of low value, non-indicated medical services evident in the U.S. health system today.

ASA's disclosure and conflict of interest policy can be found at www.asahq.org.

Sources


American Society of Anesthesiologists (ASA) is an educational research and scientific association of physicians organized to raise and maintain the standards of the medical practice of anesthesiology and improves the care of the patient. Since its founding in 1905, the Society’s achievements have made it an important voice in American medicine and the foremost advocate for all patients who require anesthesia or relief from pain. As physicians, anesthesiologists are responsible for administering anesthesia to relieve pain and for managing vital life functions, including breathing, heart rhythm and blood pressure, during surgery. After surgery, they maintain the patient in a comfortable state during the recovery and are involved in the provision of critical care medicine in the intensive care unit.

For more information about ASA, visit www.asahq.org.

About the ABIM Foundation

The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenets of professionalism in practice.

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Don’t prescribe opioid analgesics as first-line therapy to treat chronic non-cancer pain.

Physicians should consider multimodal therapy, including non-drug treatments such as behavioral and physical therapies prior to pharmacological intervention. If drug therapy appears indicated, non-opioid medication (e.g., NSAIDs, anticonvulsants, etc.) should be trialed prior to commencing opioids.

Don’t prescribe opioid analgesics as long-term therapy to treat chronic non-cancer pain until the risks are considered and discussed with the patient.

Patients should be informed of the risks of such treatment, including the potential for addiction. Physicians and patients should review and sign a written agreement that identifies the responsibilities of each party (e.g., urine drug testing) and the consequences of non-compliance with the agreement. Physicians should be cautious in co-prescribing opioids and benzodiazepines. Physicians should proactively evaluate and treat, if indicated, the nearly universal side effects of constipation and low testosterone or estrogen.

Avoid imaging studies (MRI, CT or X-rays) for acute low back pain without specific indications.

Imaging for low back pain in the first six weeks after pain begins should be avoided in the absence of specific clinical indications (e.g., history of cancer with potential metastases, known aortic aneurism, progressive neurologic deficit, etc.). Most low back pain does not need imaging and doing so may reveal incidental findings that divert attention and increase the risk of having unhelpful surgery.

Don’t use intravenous sedation for diagnostic and therapeutic nerve blocks, or joint injections as a default practice. *

Intravenous sedation, such as with propofol, midazolam or ultrashort-acting opioid infusions for diagnostic and therapeutic nerve blocks, or joint injections, should not be used as the default practice. Ideally, diagnostic procedures should be performed with local anesthetic alone. Intravenous sedation can be used after evaluation and discussion of risks, including interference with assessing the acute pain relieving effects of the procedure and the potential for false positive responses. American Society of Anesthesiologists Standards for Basic Anesthetic Monitoring should be followed in cases where moderate or deep sedation is provided or anticipated.

Avoid irreversible interventions for non-cancer pain that carry significant costs and/or risks.

Irreversible interventions for non-cancer pain, such as peripheral chemical neurolytic blocks or peripheral radiofrequency ablation, should be avoided because they may carry significant long-term risks of weakness, numbness or increased pain.

*This recommendation does not apply to pediatric patients.
How This List Was Created

The American Society of Anesthesiologists (ASA) Committee on Pain Medicine was charged with developing the “Top 5 List” on pain medicine for the Choosing Wisely® campaign. Committee members submitted potential recommendations for the campaign, and from this list voted on which recommendations should be included in the final “Top 5 List.” The literature was then searched to provide supporting evidence. The Committee communicated electronically and met in person during the development and approval process.

Once approved by the Committee, the “Top 5 List” was reviewed by ASA’s Chair of the Section on Subspecialties, Vice President for Scientific Affairs, Executive Committee and Administrative Council. ASA’s “Top 5 List” for pain medicine has been endorsed by the American Pain Society.

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For more information about ASA, visit www.asahq.org.

For more information or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwisely.org.
**Five Things Physicians and Patients Should Question**

1. **Don’t perform population based screening for 25-OH-Vitamin D deficiency.**
   
   Vitamin D deficiency is common in many populations, particularly in patients at higher latitudes, during winter months and in those with limited sun exposure. Over the counter Vitamin D supplements and increased summer sun exposure are sufficient for most otherwise healthy patients. Laboratory testing is appropriate in higher risk patients when results will be used to institute more aggressive therapy (e.g., osteoporosis, chronic kidney disease, malabsorption, some infections, obese individuals).

2. **Don’t perform low risk HPV testing.**
   
   National guidelines provide for HPV testing in patients with certain abnormal Pap smears and in other select clinical indications. The presence of high risk HPV leads to more frequent examination or more aggressive investigation (e.g., colposcopy and biopsy). There is no medical indication for low risk HPV testing (HPV types that cause genital warts or very minor cell changes on the cervix) because the infection is not associated with disease progression and there is no treatment or therapy change indicated when low risk HPV is identified.

3. **Avoid routine preoperative testing for low risk surgeries without a clinical indication.**
   
   Most preoperative tests (typically a complete blood count, Prothrombin Time and Partial Prothromboplastin Time, basic metabolic panel and urinalysis) performed on elective surgical patients are normal. Findings influence management in under 3% of patients tested. In almost all cases, no adverse outcomes are observed when clinically stable patients undergo elective surgery, irrespective of whether an abnormal test is identified. Preoperative testing is appropriate in symptomatic patients and those with risks factors for which diagnostic testing can provide clarification of patient surgical risk.

4. **Only order Methylated Septin 9 (SEPT9) to screen for colon cancer on patients for whom conventional diagnostics are not possible.**
   
   Methylated Septin 9 (SEPT9) is a plasma test to screen patients for colorectal cancer. Its sensitivity and specificity are similar to commonly ordered stool guaiac or fecal immune tests. It offers an advantage over no testing in patients that refuse these tests or who, despite aggressive counseling, decline to have recommended colonoscopy. The test should not be considered as an alternative to standard diagnostic procedures when those procedures are possible.

5. **Don’t use bleeding time test to guide patient care.**
   
   The bleeding time test is an older assay that has been replaced by alternative coagulation tests. The relationship between the bleeding time test and the risk of a patient’s actually bleeding has not been established. Further, the test leaves a scar on the forearm. There are other reliable tests of coagulation available to evaluate the risks of bleeding in appropriate patient populations.

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1. **Don’t order follow up or serial echocardiograms for surveillance after a finding of trace valvular regurgitation on an initial echocardiogram.**

Trace mitral, tricuspid and pulmonic regurgitation can be detected in 70% to 90% of normal individuals and has no adverse clinical implications. The clinical significance of a small amount of aortic regurgitation with an otherwise normal echocardiographic study is unknown.

2. **Don’t repeat echocardiograms in stable, asymptomatic patients with a murmur/click, where a previous exam revealed no significant pathology.**

Repeat imaging to address the same question, when no pathology has been previously found and there has been no clinical change in the patient’s condition, is not indicated.

3. **Avoid echocardiograms for preoperative perioperative assessment of patients with no history or symptoms of heart disease.**

Perioperative echocardiography is used to clarify signs or symptoms of cardiovascular disease, or to investigate abnormal heart tests. Resting left ventricular (LV) function is not a consistent predictor of perioperative ischemic events; even reduced LV systolic function has poor predictive value for perioperative cardiac events.

4. **Avoid using stress echocardiograms on asymptomatic patients who meet “low risk” scoring criteria for coronary disease.**

Stress echocardiography is mostly used in symptomatic patients to assist in the diagnosis of obstructive coronary artery disease. There is very little information on using stress echocardiography in asymptomatic individuals for the purposes of cardiovascular risk assessment, as a stand-alone test or in addition to conventional risk factors.

5. **Avoid transesophageal echocardiography (TEE) to detect cardiac sources of embolization if a source has been identified and patient management will not change.**

Tests whose results will not alter management should not be ordered. Protocol-driven testing can be useful if it serves as a reminder not to omit a test or procedure, but should always be individualized to the particular patient. While TEE is safe, even the small degree of risk associated with a procedure is not justified if there is no expected clinical benefit.

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These items are provided solely for informational purposes and are not intended as a substitute for consultation with a medical professional. Patients with any specific questions about the items on this list or their individual situation should consult their physician.
1. Don’t transfuse more than the minimum number of red blood cell (RBC) units necessary to relieve symptoms of anemia or to return a patient to a safe hemoglobin range (7 to 8 g/dL in stable, non-cardiac in-patients).

Transfusion of the smallest effective dose of RBCs is recommended because liberal transfusion strategies do not improve outcomes when compared to restrictive strategies. Unnecessary transfusion generates costs and exposes patients to potential adverse effects without any likelihood of benefit. Clinicians are urged to avoid the routine administration of 2 units of RBCs if 1 unit is sufficient and to use appropriate weight-based dosing of RBCs in children.

2. Don’t test for thrombophilia in adult patients with venous thromboembolism (VTE) occurring in the setting of major transient risk factors (surgery, trauma or prolonged immobility).

Thrombophilia testing is costly and can result in harm to patients if the duration of anticoagulation is inappropriately prolonged or if patients are incorrectly labeled as thrombophilic. Thrombophilia testing does not change the management of VTEs occurring in the setting of major transient VTE risk factors. When VTE occurs in the setting of pregnancy or hormonal therapy, or when there is a strong family history plus a major transient risk factor, the role of thrombophilia testing is complex and patients and clinicians are advised to seek guidance from an expert in VTE.

3. Don’t use inferior vena cava (IVC) filters routinely in patients with acute VTE.

IVC filters are costly, can cause harm and do not have a strong evidentiary basis. The main indication for IVC filters is patients with acute VTE and a contraindication to anticoagulation such as active bleeding or a high risk of anticoagulant-associated bleeding. Lesser indications that may be reasonable in some cases include patients experiencing pulmonary embolism (PE) despite appropriate, therapeutic anticoagulation, or patients with massive PE and poor cardiopulmonary reserve. Retrieved filters are recommended over permanent filters with removal of the filter when the risk for PE has resolved and/or when anticoagulation can be safely resumed.

4. Don’t administer plasma or prothrombin complex concentrates for non-emergent reversal of vitamin K antagonists (i.e. outside of the setting of major bleeding, intracranial hemorrhage or anticipated emergent surgery).

Blood products can cause serious harm to patients, are costly and are rarely indicated in the reversal of vitamin K antagonists. In non-emergent situations, elevations in the international normalized ratio are best addressed by holding the vitamin K antagonist and/or by administering vitamin K.

5. Limit surveillance computed tomography (CT) scans in asymptomatic patients following curative-intent treatment for aggressive lymphoma.

CT surveillance in asymptomatic patients in remission from aggressive non-Hodgkin lymphoma may be harmful through a small but cumulative risk of radiation-induced malignancy. It is also costly and has not been demonstrated to improve survival. Physicians are encouraged to carefully weigh the anticipated benefits of post-treatment CT scans against the potential harm of radiation exposure. Due to a decreasing probability of relapse with the passage of time and a lack of proven benefit, CT scans in asymptomatic patients more than 2 years beyond the completion of treatment are rarely advisable.

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<td>Non-invasive testing is not useful for patients undergoing low-risk non-cardiac surgery or with no cardiac symptoms or clinical risk factors undergoing intermediate-risk non-cardiac surgery. These types of testing do not change the patient’s clinical management or outcomes and will result in increased costs. Therefore, it is not appropriate to perform cardiac imaging procedures for non-cardiac surgery risk assessment in patients with no cardiac symptoms, clinical risk factors or who have moderate to good functional capacity.</td>
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<thead>
<tr>
<th>5</th>
<th>Use methods to reduce radiation exposure in cardiac imaging, whenever possible, including not performing such tests when limited benefits are likely.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The key step to reduce or eliminate radiation exposure is appropriate selection of any test or procedure for a specific person, in keeping with medical society recommendations, such as appropriate use criteria. Health care providers should incorporate new methodologies in cardiac imaging to reduce patient exposure to radiation while maintaining high-quality test results.</td>
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</tbody>
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The American Society of Nuclear Cardiology (ASNC) appointed a writing group of content experts to identify five areas in which to make recommendations. Areas were selected for the evidence-based data available to direct provider decision-making and the potential for improving patient selection and care by eliminating inappropriate testing. Specific recommendations were drafted for each subject area, accompanied by peer-reviewed literature citations. These recommendations were reviewed by the ASNC Quality Assurance Committee and Board of Directors prior to submission to the Choosing Wisely campaign. ASNC’s disclosure and conflict of interest policy can be found at www.asnc.org.

Sources


About the ABIM Foundation:
The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenants of professionalism in practice.

To learn more about the ABIM Foundation, visit www.abimfoundation.org.

About the American Society of Nuclear Cardiology:
The American Society of Nuclear Cardiology (ASNC) is the voice of more than 4,500 physicians, technologists and scientists dedicated to the science and practice of nuclear cardiology. Since 1993, ASNC has been establishing the standard for excellence in cardiovascular imaging through the development of clinical guidelines, professional education and research development.

For more information or questions, please visit www.asnc.org.
Don’t perform surgery to remove a breast lump for suspicious findings unless needle biopsy cannot be done.

- Needle biopsy is large bore core biopsy or vacuum-assisted large bore needle for histology or fine needle aspiration for cytology.
- Needle biopsy may be directed by breast imaging (ultrasound, mammographic, magnetic resonance imaging) or by direct palpation.
- Studies show that confirmation of breast cancer diagnosis prior to any surgery allows for complete multidisciplinary treatment counseling, reduces the overall number of surgical procedures needed for treatment, improves the cosmetic results of surgery and avoids mastectomy resulting from multiple surgical procedures.
- Use of needle biopsy also makes surgery altogether unnecessary for the majority of image-detected breast lesions that require biopsy but prove to be benign.
- Needle biopsy is generally less costly than open surgical biopsy.
- Some breast lesions require surgical biopsy because of a location in the breast that precludes image localization. This may apply to 10–15% of breast lesions. Surgeons performing surgical breast biopsy without preceding needle biopsy should document the reason for no needle biopsy.

Don’t initiate surveillance testing after cancer treatment without providing the patient a survivorship care plan.

- Inappropriate or overused testing after cancer treatment is common, but provides no value in surveillance for recurrence and often leads to other unnecessary tests, potential morbidity, anxiety, uncertainty and higher cost.
- A survivorship care plan provides the patient and their primary providers an evidence-based road map for surveillance testing and supportive care.
- The Institute of Medicine identified the need for a survivorship care plan as a key factor to help cancer patients transition to long-term surveillance care, avoid unnecessary services and seek appropriate rehabilitative care and emotional support.
- A survivorship care plan includes a summary of the type and stage of the cancer, treatment received, the plan for type and frequency of surveillance testing and information on resources for rehabilitative and supportive care.
- Templates for survivorship care plans are available from organizations including the Livestrong Foundation, the National Coalition for Cancer Survivorship and the American Society of Clinical Oncology.
  
  - LiveStrong Care Plan: [www.livestrongcareplan.org](http://www.livestrongcareplan.org)
  - JourneyForward: [www.journeyforward.org](http://www.journeyforward.org)
  - American Society of Clinical Oncology: [www.cancer.net/survivorship/asco-cancer-treatment-summaries](http://www.cancer.net/survivorship/asco-cancer-treatment-summaries)
Don’t use surgery as the initial treatment without considering presurgical (neoadjuvant) systemic and/or radiation for cancer types and stage where it is effective at improving local cancer control, quality of life or survival.

- In many cancer types, presurgical chemotherapy, hormone/endocrine therapy and/or radiation therapy followed by surgery is better than surgery as the first treatment. This often shrinks the cancer, allowing more limited surgery that maintains organ function, reduces the chances of cancer recurrence and spread and improves the quality of life.
- For example, presurgical therapy may make mastectomy unnecessary with breast cancer, a colostomy unnecessary with rectal cancer, voice-sparing surgery possible with laryngeal cancer and amputation unnecessary with extremity soft tissue sarcoma.
- When used appropriately, there is no evidence that the cancer spreads during presurgical therapy and that cancer survival is the same or better as with initial surgery.
- Despite its known advantages, many people are not provided the advantages of presurgical therapy.
- Disease sites where this should be considered include:
  - Clinical Stage IIB and IIIA Non Small Cell Lung Cancer
  - Clinical T2-4a; Any N positive esophageal cancer
  - Clinical T3 and T4 rectal cancer
  - Clinical T2, T3 or Stage III breast cancer
  - Head and Neck cancer
  - Resectable pancreas cancer
  - Extremity soft tissue sarcomas where resection may affect functional outcomes

Don’t perform major abdominal surgery or thoracic surgery without a pathway or standard protocol for postoperative pain control and pneumonia prevention.

- Uncontrolled pain and pneumonia after major abdominal and thoracic surgery are factors that lead to other serious complications and prolonged hospitalization.
- Coordinated care efforts and established care pathways to control pain and prevent pneumonia reduce the frequency of complications and reduce length of hospital stay and should be in place.
- Fewer pulmonary complications occur when adequate analgesia is provided making postoperative pain protocol and pulmonary plan as essential elements of care.
  - Facilities that conduct flow analyses in patients with lung cancer have improved quality care.
  - Institutions or hospitals in collaboration with the surgeons and other medical staff should develop these pathways, standard protocol or procedures and assure their implementation.
  - Improvement efforts need to address documentation and standardization of process of care.

Don’t initiate cancer treatment without defining the extent of the cancer (through clinical staging) and discussing with the patient the intent of treatment.

- Treatment intent may be diagnostic, curative, maintenance or palliative.
- Many patients, especially those with advanced or metastatic cancer, do not have a full understanding of the intent of cancer treatment – they identify that treatment may be curative when in fact it is given only with palliative intent. They often do not understand the costs, risks and potential side effects of the treatment.
- Palliative therapy may provide relief of symptoms or short-term prolongation of survival, but often can cause substantial toxic effects and can interfere with the patient’s quality of life.
- This directive should be applied to all phases of cancer treatment from initial therapy to treatment for recurrent and metastatic cancer.
- Clinical staging should be performed and documented using information from history and physical examination, relevant biopsy and appropriate imaging based on the type and stage (extent) of the cancer.
Don’t use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).

Coronary artery calcium scoring is used for evaluation of individuals without known coronary artery disease and offers limited incremental prognostic value for individuals with known coronary artery disease, such as those with stents and bypass grafts.

Don’t order coronary artery calcium scoring for preoperative evaluation for any surgery, irrespective of patient risk.

No evidence exists to support the diagnostic or prognostic potential of coronary artery calcium scoring in individuals in the preoperative setting. This practice may add costs and confound professional guideline-based evaluations.

Don’t order coronary artery calcium scoring for screening purposes on low risk asymptomatic individuals except for those with a family history of premature coronary artery disease.

Net reclassification of risk by coronary artery calcium scoring, when added to clinical risk scoring, is least effective in low risk individuals.

Don’t routinely order coronary computed tomography angiography for screening asymptomatic individuals.

Coronary computed tomography angiography findings of coronary artery disease stenosis severity rarely offer incremental discrimination over coronary artery calcium scoring in asymptomatic individuals.

Don’t use coronary computed tomography angiography in high risk* emergency department patients presenting with acute chest pain.

To date, randomized controlled trials evaluating use of coronary computed tomography angiography for individuals presenting with acute chest pain in the emergency department have been limited to low or low-intermediate risk individuals.

*Risk defined by the Thrombolysis In Myocardial Infarction (TIMI) risk score for unstable angina/acute coronary syndromes.
Don’t perform stress cardiovascular magnetic resonance (CMR) in the initial evaluation of chest pain patients with low pretest probability of coronary artery disease.

There are lower cost stress tests available for the initial evaluation of low-risk chest pain patients, particularly when they have a normal electrocardiogram and can exercise. Stress CMR can be valuable in evaluating intermediate-risk patients with abnormal electrocardiograms or who cannot exercise, or when initial test results are equivocal.

Don’t perform stress CMR as a pre-operative assessment in patients scheduled to undergo low-risk, non-cardiac surgery.

Stress testing has not been shown to be useful in patients undergoing low-risk surgery. Therefore, stress CMR in these patients will not improve outcomes and will increase cost.

Don’t perform stress CMR in patients with acute chest pain and high probability of coronary artery disease.

Stress testing can increase risk and delay therapy in patients with acute chest pain and markers of high risk, such as ST segment elevation and/or positive cardiac enzymes. After initial evaluation and therapy, non-stress CMR may aid in diagnosing ischemic or non-ischemic myocardial injury.

Don’t perform coronary CMR in symptomatic patients with a history of coronary stents.

Coronary stents cause artifacts on CMR that preclude accurate evaluation. Therefore, coronary CMR in these patients will not be diagnostic.

Don’t perform coronary CMR in the initial evaluation of asymptomatic patients.

Coronary CMR has not been well established for the evaluation of coronary atherosclerosis. Coronary CMR is primarily indicated for detecting and characterizing anomalous coronary arteries.
Don’t recommend daily home finger glucose testing in patients with Type 2 diabetes mellitus not using insulin.

Self-monitoring of blood glucose (SMBG) is an integral part of patient self-management in maintaining safe and target-driven glucose control in type 1 diabetes. However, there is no benefit to daily finger glucose testing in patients with type 2 diabetes mellitus who are not on insulin or medications associated with hypoglycemia, and there is negative economic impact and potential negative clinical impact of daily glucose testing. SMBG should be reserved for patients during the titration of their medication doses or during periods of changes in patients’ diet and exercise routines.

Don’t perform routine general health checks for asymptomatic adults.

Routine general health checks are office visits between a health professional and a patient exclusively for preventive counseling and screening tests. In contrast to office visits for acute illness, specific evidence-based preventive strategies, or chronic care management such as treatment of high blood pressure, regularly scheduled general health checks without a specific cause including the “health maintenance” annual visit, have not shown to be effective in reducing morbidity, mortality or hospitalization, while creating a potential for harm from unnecessary testing.

Don’t perform routine pre-operative testing before low-risk surgical procedures.

Pre-operative assessment is expected before all surgical procedures. This assessment includes an appropriately directed and sufficiently comprehensive history and physical examination, and, in some cases, properly includes laboratory and other testing to help direct management and assess surgical risk. However, pre-operative testing for low-risk surgical procedures (such as cataract extraction) results in unnecessary delays and adds to significant avoidable costs and should be eliminated.

Don’t recommend cancer screening in adults with life expectancy of less than 10 years.

Screening for cancer can be lifesaving in otherwise healthy at-risk patients. While screening tests lead to a mortality benefit, which emerges years after the test is performed, they expose patients to immediate potential harms. Patients with life expectancies of less than 10 years are unlikely to live long enough to derive the distant benefit from screening. However, these patients are in fact more likely to experience the harms since patients with limited life expectancy are more likely to be frail and more susceptible to complications of testing and treatments. Therefore the balance of potential benefits and harms does not favor recommending cancer screening in patients with life expectancies of less than 10 years.

Don’t place, or leave in place, peripherally inserted central catheters for patient or provider convenience.

Peripherally inserted central catheters (or “PICCs”) are commonly used devices in contemporary medical practice that are associated with two costly and potentially lethal health care-acquired complications: central-line associated bloodstream infection (CLABSI) and venous thromboembolism (VTE). Given the clinical and economic consequences of these complications, placement of PICCs should be limited to acceptable indications (long-term intravenous antibiotics, total parenteral nutrition, chemotherapy and frequent blood draws). PICCs should be promptly removed when acceptable indications for their use ends.

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Don’t place, or leave in place, urinary catheters for incontinence or convenience or monitoring of output for non-critically ill patients (acceptable indications: critical illness, obstruction, hospice, perioperatively for <2 days for urologic procedures; use weights instead to monitor diuresis).

Catheter Associated Urinary Tract Infections (CAUTIs) are the most frequently occurring health care acquired infection (HAI). Use of urinary catheters associated with greater morbidity, mortality and health care costs. Published guidelines suggest that hospitals and long-term care facilities should develop, maintain and promulgate policies and procedures for recommended catheter insertion indications, insertion and maintenance techniques, discontinuation strategies and replacement indications.

Don’t prescribe medications for stress ulcer prophylaxis to medical inpatients unless at high risk for GI complications.

According to published guidelines, medications for stress ulcer prophylaxis are not recommended for adult patients in non-ICU settings. Histamine-2 receptor antagonists (H2RAs) and proton-pump inhibitors (PPIs), commonly used to treat stress ulcers, are associated with adverse drug events and increased medication costs, and commonly enhance susceptibility to community-acquired nosocomial pneumonia and Clostridium difficile. Adherence to therapeutic guidelines will aid health care providers in reducing treatment of patients without clinically important risk factors for gastrointestinal bleeding.

Avoid transfusions of red blood cells for arbitrary hemoglobin or hematocrit thresholds and in the absence of symptoms of active coronary disease, heart failure or stroke.

The AABB recommends adhering to a restrictive transfusion strategy (7 to 8 g/dL) in hospitalized, stable patients. The AABB suggests that transfusion decisions be influenced by symptoms as well as hemoglobin concentration. According to a National Institutes of Health Consensus Conference, no single criterion should be used as an indication for red cell component therapy. Instead, multiple factors related to the patient’s clinical status and oxygen delivery should be considered.

Don’t order continuous telemetry monitoring outside of the ICU without using a protocol that governs continuation.

Telemetric monitoring is of limited utility or measurable benefit in low risk cardiac chest pain patients with normal electrocardiogram. Published guidelines provide clear indications for the use of telemetric monitoring in patients which are contingent upon frequency, severity, duration and conditions under which the symptoms occur. Inappropriate use of telemetric monitoring is likely to increase cost of care and produce false positives potentially resulting in errors in patient management.

Don’t perform repetitive CBC and chemistry testing in the face of clinical and lab stability.

Hospitalized patients frequently have considerable volumes of blood drawn (phlebotomy) for diagnostic testing during short periods of time. Phlebotomy is highly associated with changes in hemoglobin and hematocrit levels for patients and can contribute to anemia. This anemia, in turn, may have significant consequences, especially for patients with cardiorespiratory diseases. Additionally, reducing the frequency of daily unnecessary phlebotomy can result in significant cost savings for hospitals.

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Patients who have no cardiac history and good functional status do not require preoperative stress testing prior to non-cardiac thoracic surgery.

- Functional status has been shown to be reliable for prediction of perioperative and long-term cardiac events. In highly functional asymptomatic patients, management is rarely changed by preoperative stress testing. It is therefore appropriate to proceed with the planned surgery without it.

Unnecessary stress testing can be harmful because it increases the cost of care and delays treatment without altering surgical or perioperative management in a meaningful way. Furthermore, low-risk patients who undergo preoperative stress testing are more likely to obtain additional invasive testing with risks of complications.

Cardiac complications are significant contributors to morbidity and mortality after non-cardiac thoracic surgery, and it is important to identify patients preoperatively who are at risk for these complications. The most valuable tools in this endeavor include a thorough history, physical exam and resting EKG. Cardiac stress testing can be an important adjunct in this evaluation, but it should only be used when clinically indicated.

Don’t initiate routine evaluation of carotid artery disease prior to cardiac surgery in the absence of symptoms or other high-risk criteria.

- Carotid stenosis with symptoms (stroke or transient ischemic attacks [TIA]) is a known risk for cardiovascular accident and appropriate for preoperative testing.

- The presence of a carotid bruit does not equate to an increased risk of stroke after cardiac surgery.

- Patients with carotid stenosis have a higher rate of cerebrovascular complications after cardiac surgery, but there is no evidence that prophylactic or concomitant carotid surgery decreases this rate of complications in asymptomatic patients.

ACC/AHA 2011 guidelines for coronary artery bypass graft surgery indicate carotid artery duplex scanning is reasonable in selected patients who are considered to have high-risk features. However, this was based on a consensus and a low level of evidence. In addition, a recent consensus report from the United Kingdom questioned whether neurologic sequellae developing in cardiac surgery patients with asymptomatic carotid disease are due to the carotid artery disease or rather act as a surrogate for an increased stroke risk from atherosclerotic issues with the aorta.

The Northern Manhattan Stroke Study concluded that carotid auscultation had poor sensitivity and positive predictive value for carotid stenosis and so decisions on obtaining carotid duplex studies should be considered based on symptoms or risk factors rather than findings on auscultation.

Don’t perform a routine pre-discharge echocardiogram after cardiac valve replacement surgery.

- Pre-discharge cardiac echocardiography is useful after cardiac valve repair. It provides information regarding the integrity of the repair and allows the opportunity for early identification of problems that may need to be addressed surgically during the index hospitalization. Unlike valve repair, there is a lack of evidence that supports the routine use of cardiac echocardiography pre-discharge after cardiac valve replacement.

- Scenarios that would justify the use of pre-discharge cardiac echocardiography include: inability to perform intraoperative transesophageal echocardiography, clinical signs and symptoms worrisome for valvular malfunction or infection, or a large pericardial effusion.
Patients with suspected or biopsy proven Stage I NSCLC do not require brain imaging prior to definitive care in the absence of neurologic symptoms.

- The incidence of occult brain metastasis in Stage I lung cancer is low (<3%) and so routine brain imaging results in increased costs, delays in therapy and rarely changes patient management.

- False-positive studies occur in up to 11% of patients resulting in further invasive testing or incorrect over staging, with potentially tragic effects on treatment decisions and outcomes.

Some clinicians perform routine screening by brain magnetic resonance imaging (MRI) or computed tomography (CT) scans to rule out occult brain metastasis in asymptomatic patients prior to surgical resection of early stage lung cancer. This practice of routine screening for occult brain metastases has not been evaluated by a randomized clinical trial and may not be cost-effective or medically necessary.

Pooled data from retrospective studies that included a comprehensive clinical evaluation demonstrated that only 3% of patients who have a negative neurologic evaluation present with intracranial metastasis. One study, limited to Stage I patients, reported a prevalence of 1.3%. The joint statement of the American Thoracic Society and the European Respiratory Society did not advocate preoperative imaging of the brain in patients with NSCLC who present without neurologic symptoms, and the current National Comprehensive Cancer Network (NCCN) non-small cell lung cancer guidelines do not recommend preoperative brain imaging for asymptomatic patients with Stage IA non-small cell lung carcinoma.

Prior to cardiac surgery, there is no need for pulmonary function testing in the absence of respiratory symptoms.

- PFTs can be helpful in determining risk in cardiac surgery, but patients with no pulmonary disease are unlikely to benefit and do not justify testing.

- Symptoms attributed to cardiac disease that are respiratory in nature should be better characterized with PFTs.

Risk models for cardiac surgery developed from review of The Society of Thoracic Surgeons Adult Cardiac Surgery Database incorporate a variable for chronic lung disease. Only recently have actual FEV1 and DLCO data been collected in the database. In the absence of respiratory symptoms or suggestive medical history, pulmonary function testing is quite unlikely to change patient management or assist in risk assessment. Although some data are beginning to emerge about preoperative pulmonary rehabilitation prior to cardiac surgery for patients with even mild to moderate obstructive disease, this does not directly extrapolate to asymptomatic patients.
How This List Was Created

The Society of Thoracic Surgeons (STS) list development process was led by the First Vice-President, and involved input from multiple workforces, including the Workforce on Adult Cardiac and Vascular Surgery, Workforce on General Thoracic Surgery, and Workforce on Evidence Based Surgery, and was staffed by STS’ Director of Quality. The initial 17 recommendations from these Workforces were narrowed down to eight based upon frequency, clinical guidelines and potential impact. STS leadership approved these eight recommendations for presentation to members in an online survey. The results of the survey, as well as research and systematic literature review by the Workforce on Evidence Based Surgery, were presented to the STS Executive Committee, which approved the five final recommendations.

Sources


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Five Things Physicians and Patients Should Question

1. Don’t do work up for clotting disorder (order hypercoagulable testing) for patients who develop first episode of deep vein thrombosis (DVT) in the setting of a known cause.
   Lab tests to look for a clotting disorder will not alter treatment of a venous blood clot, even if an abnormality is found. DVT is a very common disorder, and recent discoveries of clotting abnormalities have led to increased testing without proven benefit.

2. Don’t reimage DVT in the absence of a clinical change.
   Repeat ultrasound images to evaluate “response” of venous clot to therapy does not alter treatment.

3. Avoid cardiovascular testing for patients undergoing low-risk surgery.
   Pre-operative stress testing does not alter therapy or decision-making in patients facing low-risk surgery.

4. Refrain from percutaneous or surgical revascularization of peripheral artery stenosis in patients without claudication or critical limb ischemia.
   Patients without symptoms will not benefit from attempts to improve circulation. No evidence exists to support improving circulation to prevent progression of disease. There is no proven preventive benefit, only symptomatic benefit.

5. Don’t screen for renal artery stenosis in patients without resistant hypertension and with normal renal function, even if known atherosclerosis is present.
   Performing surgery or angioplasty to improve circulation to the kidneys has no proven preventive benefit, and shouldn’t be considered unless there is evidence of symptoms, such as elevated blood pressure or decreased renal function.

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