Thorough and efficient perioperative evaluation is mandatory for all patients undergoing dermatologic operation. Patients may present with concise or extensive medical histories, and an organized approach will focus attention on issues relevant to the patient’s dermatologic disease and the planned surgical procedure. Management of common perioperative issues in a proactive and standardized manner, with opportunity to individualize decisions when clinical conditions indicate, is an efficient and optimal approach. This review highlights the efficient and thorough evaluation of perioperative issues and suggests guidelines for the optimal management of common perioperative issues, including cardiac devices, antibiotic prophylaxis, and anticoagulation. (J Am Acad Dermatol 2006;54:119-27.)

Active and consistent management of perioperative issues is critically important to dermatologic surgeons for multiple reasons. Thorough perioperative evaluation will optimize patient safety by identifying important medical considerations that can be managed appropriately during the cutaneous surgical procedure. Detailed perioperative evaluation will also help develop rapport and gain patient confidence by demonstrating active participation in patients' medical care. Purposeful and consistent management of common perioperative issues, including anticoagulants, antibiotic prophylaxis, and cardiac devices, will ensure the best possible surgical outcome. Finally, when performing the perioperative evaluation, the dermatologic surgeon can triage tumors to appropriate treatment modalities and, if necessary, enlist the valuable support of colleagues before the operation. This review presents a standardized approach to the perioperative evaluation and treatment of patients having dermatologic surgical procedures. The approach outlined is the one practiced in a tertiary referral center, and certain aspects may require modification when applied to an office-based practice.

All patients merit evaluation of their medical status preoperatively. This is not to say that a complete physical examination is warranted; in fact, because most patients have an established relationship with a primary care physician, they usually present with a stable medical history that permits efficient evaluation and triage to the appropriate treatment. Because each patient has special needs, individualizing the approach to important issues related to age, primary disease, cognitive status, expectations, and the planned procedures will increase patient safety and satisfaction.

Ideally, perioperative issues are managed during a preoperative consultative visit in the office where issues can be finalized before the procedure. However, when patients travel significant distances or have urgent medical needs, the perioperative evaluation may need to be conducted immediately preoperatively. To optimize outcome, protocolized perioperative management and clear communication from the physician’s appointment coordinators can maximize efficiency and ensure quality.

PERIOPERATIVE EVALUATION AND MANAGEMENT: STEP BY STEP

A step-by-step review of a typical perioperative evaluation highlights the essential components of the interaction and allows for definition of optimal management of common presenting issues. Although underemphasized, a comfortable personal style of patient care interaction is important. Patients appreciate a personable approach and a professional
appearance in their physicians. An unhurried pace, with ample time for explanations and questions, instills confidence in patients. A supportive approach can also minimize misunderstandings that can lead to medicolegal issues if complications occur.

**Presenting symptom**

Reviewing the presenting symptom is the first step in the perioperative evaluation. Discussion about the involvement and role of referring physicians and confirmation of their involvement are comforting to patients. Determining whether a medical problem is oncologic and medically necessary or cosmetic in nature also helps identify the major priorities and discussion topics that need to be covered with the patient. Review of the presenting symptom involves eliciting a history of duration, severity, associated symptoms, disease effects, patient knowledge of the disease process and treatment options, and previous treatment and outcomes. Thorough review of the patient’s medical history is essential to elicit key issues that require perioperative attention. Although a thorough review of pertinent medical issues is the responsibility of the dermatologic surgeon, management of important associated comorbid conditions usually involves collaboration with the patient’s primary care physician. For patients with stable medical problems, the review of medical history should focus on issues bearing on the planned procedure. Patients with significant comorbid disease, who have not recently had a health evaluation, undergoing a major stressful procedure, or having an operation involving moderate sedation or general anesthesia may require a complete preoperative medical examination, whereas patients with stable medical problems usually do not.

**Medical history**

**Cardiovascular disease.** Cardiac issues are very important and prominent in dermatologic surgery. It is essential to identify and address a history of coronary artery disease manifested by angina, recent myocardial infarction, or congestive heart failure. If symptoms of cardiovascular instability are present, then prompt evaluation and management by the primary care physician or cardiologist is critical before the operation. Other common cardiovascular issues, including prophylaxis for prevention of endocarditis, implanted cardiac devices, and anticoagulants, are discussed below.

**Antibiotic prophylaxis.** Antibiotic prophylaxis to prevent endocarditis and prosthesis infection is one of the most common decisions made in the perioperative period. However, reliable data to guide this decision are scant. Bacteremia during cutaneous operation, as documented in multiple studies, has a mean incidence of 2.8%. However, 2 of the 4 cases of bacteremia in these studies involved patients whose skin was not steriley scrubbed before the surgical procedure; therefore, the relevance is uncertain. It is important to note that the 2.8% incidence of bacteremia in these studies is similar to the 0% to 2.1% incidence of bacteremia in nonsurgical control subjects. Although few hard data are available to guide decisions about prophylaxis, the American Heart Association (AHA) cardiac guidelines, updated in 1997, are widely accepted. The AHA guidelines recommend against prophylaxis for incision or biopsy of surgically scrubbed skin; this would include sterile surgical excisions that are commonly performed in dermatologic surgery. With regard to prosthesis infection, no data in the orthopedic or infectious disease literature support or refute the use of prophylactic antibiotics. Haas and Grekin reviewed this topic in the dermatologic literature, and a comprehensive update is forthcoming.

Suggested guidelines for the treatment of prophylaxis in patients with dermatologic surgical conditions at the Mayo Clinic, Rochester, Minn, are outlined in Table I. A few points merit emphasis. The AHA guidelines divide patients into high-risk and low-risk categories for bacterial endocarditis. We modified the AHA guidelines to also address the issue of orthopedic and other prostheses. As outlined in Table I, patients at low risk never receive prophylaxis. Although patients at high risk do not receive prophylaxis for sterile cutaneous procedures, prophylaxis is indicated for procedures on inflamed or infected tissue. We also elected to include Mohs micrographic surgery as an indication for prophylaxis in patients at high risk because Mohs micrographic surgery may be a prolonged procedure and is a clean rather than a sterile procedure. We included orthopedic prosthesis as a high-risk indication because of the serious outcome of an infection, although the likelihood of infection is undefined. Similarly, we included central nervous system shunts because of the potential magnitude of an infectious complication. Finally, we included peripheral shunts or fistulas with nearby inflamed or infected tissue as an indication for prophylaxis. Prophylaxis is administered for incision of the oral or nasal mucosa, as in the AHA guidelines. Specific antibiotic therapy is outlined in Table I.

Separate but related is the issue of antibiotic prophylaxis to prevent postoperative wound infection. Because of the lack of data and guidelines on this topic, our division has developed a standard of care based on our experience, a review of the
literature, and discussion with colleagues dealing with infectious disease. Antibiotics are administered when the likelihood of an infectious complication and the severity of that infectious complication are unacceptably high. The most common scenarios for administration of antibiotics to prevent wound infection include prolonged procedures, sterility breach during the operation, high-tension wounds (particularly on the lower extremities), inflamed or cystic skin, sebaceous nasal tissue, placement of cartilage grafts, and complex flap reconstruction, particularly on the nose. Antibiotics are administered as a single preoperative dose 30 to 60 minutes before the procedure or reconstruction without or with 1 week of additional postoperative dosing. Twice rather than 4 times daily dosing for cephalosporins is often used to prevent infection.

**Implanted cardiac devices.** The management of implanted cardiac devices is a common problem; 4% of patients undergoing Mohs micrographic surgery have these devices. Although complications are unlikely, the potential severity can be substantial and complications can go unrecognized. El-Gamal et al reviewed the complications of electrosurgery in patients with pacemakers and defibrillators and found 25 instances of device interference, with 18 resultant adverse effects. An incidence calculation estimated that 1.6 complications would occur during 100 years of dermatologic surgery practice; although these complications are uncommon, they may be significant. The authors also found that no complications occurred with the use of bipolar electrosurgery. Complications included skipped beats, pacemaker reprogramming, implanted cardiac defibrillator (ICD) discharge, asystole, bradycardia, battery depletion, and supraventricular tachycardia. No episodes of ventricular tachycardia or fibrillation were reported. The outcomes resulting from these complications included episodes of syncope, altered mental status, palpitations, hemodynamic instability,
and the need for cardiology consultation, but there were no deaths, codes, or emergency department visits.

To minimize potential adverse effects of electro-surgical instruments on implanted cardiac devices, consultation with the patient’s cardiologist preoperatively about management of the device is optimal. Pacemakers generally are managed by placing a magnet over the pacemaker, turning the device off, or making no change depending on the device. The use of bipolar electrosurgery in patients with implanted cardiac devices will minimize any possible disruption with the device. For ICDs, a cardiology nurse or physician must interrogate the device in the operative suite, ensuring that recent defibrillation has not occurred, and the ICD is turned off during the operation. Patients are monitored with continuous cardiac tracings while the ICD is turned off. After the procedure has been completed, the ICD is reactivated. Management of ICDs in an office setting may be logistically prohibitive; such manipulations should be performed by cardiology personnel. Additional guidelines and tips to optimize safety with electrosurgery and implanted cardiac devices include using short bursts of energy and minimal power, placing the ground away from the cardiac device when using biterminal electrosurgery, and avoiding electrosurgery near the implanted device. Alternatives to electrosurgery for obtaining hemostasis include “hot pen” electrocautery devices.

**Pulmonary disease.** Inquiry about lung disease should focus mainly on any instability a patient may experience during the operation, including asthma or chronic obstructive pulmonary disease. Patients who are oxygen-dependent usually bring their own supply, which should be discontinued during use of electrosurgery to avoid a fire hazard.

**Liver disease.** Liver disease is of interest primarily because of alterations in drug metabolism. With liver insufficiency, the maximal dose of lidocaine, which is metabolized in the liver, is slightly reduced, although specific guidelines are not available in the Physicians’ Desk Reference or Micromedex. In addition, minor dose reductions are necessary for acetaminophen postoperatively for patients with stable liver disease. For narcotics, conservative dosing is recommended by the Physicians’ Desk Reference for patients with severe liver disease. In addition, patients with severe liver insufficiency may have concurrent coagulopathy.

**Renal disease.** Renal insufficiency also affects drug dosing by altering excretion. Narcotics should be given at 75% dose in patients with a glomerular filtration rate of 10 to 50 mL/min and at half dose in patients with glomerular filtration rate less than 10 mL/min with longer dosing intervals; cephalosporins should be given twice daily rather than 4 times daily for patients with glomerular filtration rate less than 50 mL/min or as a single dose after each session of hemodialysis for patients with dialysis-dependent chronic renal failure. Dialysis can be a factor in scheduling the procedure.

**Immunosuppression.** Chronic systemic immunosuppression, most often related to solid-organ transplantation, increases the risk of both skin cancer and infectious complications. Cardiac and renal allograft recipients are particularly susceptible to skin cancer, which may be multiple and aggressive, necessitating prolonged procedures. Because of increased risk of infectious complications, perioperative prophylactic antibiotics are more often prescribed for this population.

**Healing and scarring.** Inquiry about healing problems or keloid tendencies is important because previous healing is usually predictive of future healing. Frank preoperative discussions about scarring may establish appropriate expectations and avoid postoperative disappointment. Patients with a history of hypopigmented scars or telangiectasias often experience these problems with subsequent operations. Patients who are taking sirolimus may have a higher risk of wound dehiscence, as do patients who are receiving long-term steroid therapy. The risk of dehiscence with rapamycin during excisional cutaneous operation has not been studied, and anecdotal discussions yield conflicting opinions. For patients with a history of keloid formation, initiation of keloid prophylaxis in the form of intralesional steroids, silicon gel sheeting, or topical imiquimod may be indicated.  

**Infectious diseases.** Although infectious diseases need to be addressed explicitly, all patients are treated with universal precautions. Specific inquiry about HIV infection and hepatitis B and C may be warranted. For resurfacing procedures and lip operation, a history of herpes simplex warrants prophylactic antiviral administration. Treatment with oral valacyclovir or famciclovir is commonly started the day before or the day of the operation and continued until suture removal or complete re-epithelialization occurs.

**Neurologic disease.** Questions are asked about neurologic disease to ascertain whether there is a possibility of dementia and whether the patient is competent to consent to the procedure or whether designated family members need to provide informed consent. Understanding a patient’s level of cognitive and physical competence guides recommendations for postoperative wound care, follow-up, and the need for visiting nurse assistance.
Diet and diabetes. Unless moderate sedation will be provided, a patient should eat as usual in the perioperative period. If a patient has diabetes mellitus, it is necessary to address specifically food intake and insulin dosing to avoid hypoglycemia. Patients often mistakenly assume, because of previous surgical experiences, that they should fast or not take insulin, which can result in a medical emergency.

Hypertension. Many patients scheduled to have dermatologic surgery have a history of hypertension that is medically managed. They are instructed to take their blood pressure medication as usual. On the day of operation, the blood pressure is often modestly elevated because of nervousness. Patients with mild to moderate hypertension at the time of operation usually respond well to reassurance, music, or a low dose of midazolam or clonidine. All patients with elevated blood pressure are asked to check their blood pressure postoperatively. Occasionally, acute hypertension is detected preoperatively; referral for medical management before operation may be indicated for these patients. Uncontrolled hypertension can contribute significantly to intraoperative bleeding.

Other pertinent medical issues. General inquiry is made about any other significant medical comorbid conditions, particularly ones that may be associated with mortality. The presence of other systemic cancer may alter considerations about the desirability of treating nonmelanoma skin cancer, which is slow growing and usually not lethal. Although indices are available to quantify the likelihood of survival of patients with multiple comorbid conditions, the ability to predict accurately the life duration of individual patients is not optimal.

Surgical history
Reviewing a patient’s surgical history is important to determine the patient’s previous diseases and procedures. Determining a patient’s medical outcome and satisfaction with previous procedures is helpful because these may predict future outcomes. In addition, being aware of a patient’s previous treatments will allow the physician to explain differences in treatment approach.

Vagal reactions
A history of a vagal reaction with procedures is highly predictive of future reactions. Treatment of patients with a previous vagal reaction involves attentive nursing care, recumbent position, and comfort measures such as a cool washcloth and fan. Midazolam (10-20 mg orally) may be administered 15 to 30 minutes before the procedure to reduce anxiety and to minimize, although not eliminate, the chance of a vagal reaction.

Tobacco and ethanol use
Patients are instructed to attempt to discontinue consumption of tobacco and ethanol before the operation, particularly if a flap or graft will be necessary. Smoking cessation is a challenge for most patients; referral to a smoking cessation program can enhance the likelihood of prolonged success. Bupropion (150 mg daily for 3 days and then twice daily for 7-12 weeks) can help decrease craving. It is not known whether nicotine patches have a beneficial effect on surgical outcomes; nicotine patches are associated with lower serum levels of nicotine but on a continuous basis. Many surgeons discourage ethanol consumption for 3 days postoperatively to avoid vasodilation, which can cause hemorrhage.

Pregnancy
All women of childbearing age undergoing operation should be asked if they could be pregnant. If the woman is uncertain, a pregnancy test can be performed quickly. Dermatologic surgical procedures are possible in patients who are pregnant; however, knowledge of pregnancy may assist in deciding whether and when to perform a procedure. Although causality may be difficult to prove, complications from dermatologic surgery in a patient who is pregnant could be associated with exposure to medications that are not class A or B, or postoperative infections.

Medications
A complete list of the patient’s current medications is reviewed, with special attention to agents that may be relevant for surgery. β-Blockers can be associated with increased serum levels of lidocaine and, rarely, may cause acute hypertension and bradycardia when administered with epinephrine. Administration of epinephrine-containing local anesthesia to patients taking β-blockers has been found to be safe in clinical studies. As noted above, oral intake is monitored in patients who are diabetic taking insulin or oral hypoglycemics. Monoamine oxidase inhibitors can produce hypertension acutely with the administration of epinephrine, and tricyclic antidepressants can produce hypertension, bradycardia, and arrhythmias when given with epinephrine. Anticoagulants are common medications of concern in a preoperative evaluation. An increasingly large number of compounds are being used as anticoagulants, including aspirin, nonsteroidal anti-inflammatory drugs, warfarin, vitamin E, clopidogrel, ticlodipine, low molecular—weight heparin, and...
Table II. Suggested guidelines for the management of aspirin, nonsteroidal anti-inflammatory drugs, and warfarin

Aspirin and NSAIDs

1. If the patient is taking aspirin or NSAIDs by physician order because of a history of heart attack, angina, transient ischemic attack, or stroke, the patient should continue to take the medication
2. May discontinue aspirin 10 days or NSAIDs 3 days before operation if the reason for taking the medication is related to either of the following:
   - As prophylaxis to prevent stroke or heart attack without history of previous stroke or heart attack
   - For headaches or pain only
3. Aspirin or NSAIDs may be resumed 3 days after the procedure unless otherwise directed by the physician

Warfarin

1. As a general guideline, patient receiving warfarin should have an INR or PT determined within 1 month before operation to be sure the warfarin level is within the therapeutic range (generally 2-3.5)
2. Patient should continue taking the medication before operation unless directed otherwise by the physician

INR, International normalized ratio; NSAID, nonsteroidal anti-inflammatory drug; PT, prothrombin time.
Modified from Otley.33 By permission of Mayo Foundation for Medical Education and Research.

* ibuprofen (Advil, Wyeth, Madison, NJ; Motrin, McNeil-PPC, Fort Washington, PA; naproxen, did洛fenac sodium (Voltaren, Novartis, East Hanover, NJ), diflunisal (Dolobid, Merck, Whitehouse Station, NJ), etodolac (Lodine, Wyeth), flurbiprofen (Ansaid, Pharmacia East Hanover, NJ), indomethacin (Indocin, Merck), ketoprofen (Orudis, Wyeth), ketorolac tromethamine (Toradol, Biotech, North Peapack, NJ), nabumetone (Relafen, GlaxoSmithKline, Philadelphia, PA), oxaproxin (Daypro, Pharmacia Biotech), piroxicam (Feldene, Pzifer, Morris Plains, NJ), sulindac (Clinoril, Merck), tolmetin (Tolectin, McNeil-PPC).

Allergies

A complete list of allergies is elicited, and these compounds are avoided. Purported allergies to anesthetics such as lidocaine and procaine and to narcotics are the greatest challenge to decipher. Lidocaine allergies, although exceedingly rare, are managed with local anesthetics of a different class or with alternate agents such as preserved saline that contains benzyl alcohol or intralesional diphenhydramine.34 Narcotic allergies are also very rare; if true allergy cannot be excluded, nonnarcotic analgesics such as acetaminophen, tramadol, or ketorolac are helpful. Allergies to latex and topical medications are also important to note and manage. Patients with a history of adrenergic reactions to epinephrine often report this as an allergy, but these are pharmacologic reactions. Because these reactions are unpleasant, patients with a history of adrenergic reactions may prefer to avoid epinephrine.

Social and family history

The primary goal of eliciting a social and family history is to determine whether any restrictions on employment or activities will be necessary postoperatively. In addition, it is important to assess the availability of family support with wound care and driving. The preoperative visit may also serve to clarify issues about insurance. The family history may elicit inherited tendencies toward keloid formation or bleeding diatheses.

Psychologic history

A brief psychologic assessment is important for all patients but is especially critical for those undergoing cosmetic and elective procedures. Psychologic needs are best addressed before a procedure is

herbal medications. In a random survey, 24% of patients presenting to a dermatologic surgery department were taking medically necessary anticoagulants at the time of perioperative evaluation.25 Discontinuation or continuation of these agents may have important implications, and the potential complications can be significant.

In contrast to antibiotic prophylaxis, considerable data are available to guide decisions about the management of anticoagulants perioperatively. Six studies have demonstrated that the risk of hemorrhage is not increased in patients taking anticoagulants who undergo dermatologic operation.26-31 In addition, the risk of thrombotic events is increased in patients in whom anticoagulation therapy is discontinued perioperatively. According to a recent survey, 46 patients whose anticoagulation therapy was discontinued experienced severe thrombotic events, including stroke, myocardial infarction, or death in the immediate perioperative period.25 This study cannot prove causality, but the temporal association suggests a relationship between discontinuation of anticoagulants and thrombotic events. Surgeons also may be concerned that intraoperative oozing may be increased in patients receiving anticoagulants, complicating operations. This hypothesis was tested and refuted in a blinded, controlled study in which, on the basis of intraoperative visual inspection, surgeons were unable to determine whether patients were taking anticoagulants or not.32 Suggestions for management of anticoagulants perioperatively for dermatologic surgery are given in Table II, which highlights recommendations to continue medically necessary anticoagulant therapy in most instances. The perioperative management of anticoagulants in dermatologic surgery has been comprehensively reviewed recently.33
scheduled so that appropriate assistance from professional colleagues in psychiatry and psychology can be enlisted when indicated. Elective surgery should be avoided in a patient who is psychiatrically unstable. Attention to body dysmorphic disorder is critical for avoiding inappropriate surgery.35

Physical examination
After the medical interview has been completed, attention is turned to the physical examination. The decision to perform a complete or focused skin examination depends on the presenting symptom, the timing of the last skin examination, and whether the patient has been referred by a dermatologist. When examining patients who have potentially metastatic tumors, palpate the regional lymph nodes, liver, and spleen. A focused neurologic examination may demonstrate dysfunction in rare cases of extensive perineural invasion or may help document pre-existing neurologic deficits. A brief mental status examination, consisting mainly of normal conversation with the patient, can ensure competence for consent. For patients undergoing lower-extremity procedures, the peripheral skin and circulatory status are examined. For patients undergoing moderate sedation, examination of the cardiovascular and respiratory systems, oxygenation status, and upper airway is essential. We routinely document blood pressure, pulse, and respiratory rate immediately preoperatively.

Preoperative laboratory and radiologic examination
Indications for preoperative laboratory testing and imaging in dermatologic surgery are inadequately studied. Routine laboratory tests generally are not ordered unless indicated by findings on the history and physical examination. Pregnancy tests are performed if indicated. Routine imaging studies, including magnetic resonance imaging and computed tomography, are not commonly indicated except for extensive tumors with possible deep perineural invasion or extension to deep soft tissues or bone.36 Most soft-tissue abnormalities can be detected on physical examination, and additional useful information is uncovered infrequently with imaging.

Review of pathology material
Sophisticated clinicopathologic correlation is a unique skill that dermatologic surgeons bring to the management of cutaneous neoplasms, and the personal examination of pathology specimens in planning surgery can be helpful. The advantages of this approach include the ability to treat superficial tumors with superficial ablative modalities and to recognize infiltrative tumors necessitating full-thickness modalities. In addition, a review of pathology specimens occasionally can reveal an inaccurate diagnosis. Some medical facilities require formal review of pathology specimens before operation, but this is considered unnecessary and inefficient by many.

Impression and plan
After the preoperative history and physical examination have been completed, patients will want the dermatologic surgeon’s impression of their disease. Because most nonmelanoma skin cancer is associated with an excellent prognosis, it is important to reassure patients explicitly to relieve unstated fears. Likewise, when a patient has an aggressive tumor with metastatic potential, open discussion of the prognosis and need for close follow-up is warranted. In formulating a treatment plan for each patient’s problem, two questions are salient: (1) what are the optimal methods to treat the patient’s problems; and (2) am I the best physician to perform these procedures? Dermatologic surgeons are trained in a broad array of cutaneous procedures; however, in some cases, collaboration with or transfer to specialists from other disciplines may be indicated.

Presentation of the surgical plan should be detailed, with ample opportunity for questions. Skin markers can be used to draw the surgical plan directly on the skin and review the plan while the patient holds a mirror. This ensures that the site of surgery is correct, and it helps patients visualize the extent and type of operation planned. The surgical plan is only one part of informed consent, as noted below.

Photographic documentation
Photographic documentation of surgical procedures has become common for dermatologic surgeons. The rationale cited for this includes medicolegal and educational indications. In addition, referring physicians appreciate having images taken during operation included in correspondence.

Documentation and informed consent
The preoperative medical information reviewed above is extensive. To obtain and review this important information efficiently, a standardized history form needs to be completed by the patient before the preoperative visit. Relevant information can be reviewed with the patient, and decisions on management of prophylaxis, anticoagulants, and cardiac devices are protocolized. An example of a dermatologic surgery preoperative information sheet is shown in Fig 1.

Written documentation of all aspects of perioperative medical evaluation and management is necessary. Informed consent must document
discussion, understanding, and acceptance of the benefits, alternatives, and risks of the proposed procedure. Tailoring consent to the needs and desires of an individual patient is both reasonable and patient-centered. Frank discussion of the course of postoperative healing, particularly in relation to scar formation, is critical. Reassurance that if unexpected complications occur you will continue to support the patient can strengthen the therapeutic alliance between patient and physician.

CONCLUSION
Many decisions are made in the perioperative period that are as important to outcomes as the technical performance of the procedure itself. Increasingly, evidence-based medical practice can be used to optimize the management of perioperative issues. Protocolized management of prophylaxis, implanted cardiac devices, and anticoagulants can enhance patient safety and allow for efficient communication regarding important perioperative issues.

REFERENCES