cardiologists agreed only 46% of the time. In addition, there was disagreement as to the preferred method of revascularization in all but one patient. Although none of the patients had severe angina or left main disease, revascularization was recommended in 40% of cases, further emphasizing the lack of adherence to the ACC/AHA guidelines.

Original article Pierpont GL *et al.* (2004) Disparate opinions regarding indications for coronary artery revascularization before elective vascular surgery. *Am J Cardiol* **94:** 1124–1128

Electrocardiographic diagnosis of atrial fibrillation

The diagnosis of atrial fibrillation frequently relies on a computer-generated interpretation of the electrocardiogram and subsequent verification by the cardiologist. A recent study by Bogun and colleagues has revealed that this approach is prone to error and can result in inappropriate treatment.

The authors retrieved 2,298 electrocardiograms (in 1,085 patients) that had resulted in a computer-based interpretation of atrial fibrillation. Reinterpretation showed that the computer had generated an incorrect interpretation in 382 (35%) patients. Furthermore, the ordering physician had failed to correct the original diagnosis in 92 (24%) of these cases. Almost all of these patients had been subjected to further diagnostic testing, and needless medical treatment was initiated in 39 cases. This treatment resulted in adverse events in two patients. Compared with physicians from other subspecialties, cardiologists were significantly more likely to correct the computer interpretation of the electrocardiogram. Sinus rhythm with atrial premature complexes and sinus rhythm with artifacts were particularly susceptible to misinterpretation by the computer algorithm; Bogun *et al.* recommend that the over-reading physicians should be aware of this.

The study highlights the danger of becoming overly reliant on computerized algorithms in this setting, and emphasizes the need for more extensive education about the appearance of atrial dysrhythmias and artifacts on the electrocardiogram.

Original article Bogun F *et al.* (2004) Misdiagnosis of atrial fibrillation and its clinical consequences. *Am J Med* **117:** 636–642

Prophylaxis of patent ductus arteriosus: two studies of ibuprofen

The ductus arteriosus usually closes within a few days of birth, in response to ventilation of the lungs. Very premature infants often require pharmacologic or surgical closure of this channel, however, and prophylactic treatment might be beneficial. Two recent studies have assessed the prophylactic use of ibuprofen in this setting.

Van Overmeire and colleagues compared prophylactic ibuprofen with placebo given within 6 h of birth to 415 infants born at less than 31 weeks' gestation. Severe intraventricular hemorrhage—the primary outcome of the study—occurred at similar rates in the ibuprofen and placebo groups. Patent ductus arteriosus was significantly less frequent in the ibuprofen group than in the placebo group and the need for rescue treatment was reduced as a consequence.

In a related study, Gournay *et al.* compared prophylactic ibuprofen with placebo in infants born at less than 28 weeks' gestation. Severe pulmonary hypertension developed in three infants in the ibuprofen group and, therefore, the study was halted after only 135 enrolments. Again, infants receiving ibuprofen were significantly less likely to require surgical ligation of patent ductus arteriosus than those in the placebo group, but overall survival was not improved by the drug.

Both studies revealed a temporary decrease in urine output and an increase in serum creatinine in infants receiving ibuprofen; these unexpected renal effects warrant further investigation.

Original articles Van Overmeire B *et al.* (2004) Prophylactic ibuprofen in premature infants: a multicentre, randomised, double-blind, placebo-controlled trial. *Lancet* **364:** 1945–1949
Gournay V *et al.* (2004) Prophylactic ibuprofen versus placebo in very premature infants: a randomised, double-blind, placebo-controlled trial. *Lancet* **364:** 1939–1944