tumours (7 at the site of the drug application). Tumour types included squamous cell carcinoma, cutaneous sarcoma and malignant melanoma. For pimecrolimus, 10 postmarketing cases of cancer were reported, involving 4 children (3 less than 6 years of age) and 6 adults. Of the 10 cases, 6 involved cutaneous tumours and 4 were lymphomas. Diagnoses were made 7–300 days after treatment was started (median time to diagnosis was 90 days).

**What to do:** As second-line agents, these drugs should be used only if other therapies (topical corticosteroids, emollients) are ineffective or inappropriate. They should not be used by patients with weakened or compromised immune systems, by children under the age of 2 or by patients with active viral skin infections. Short-term or intermittent use is advised. Unfortunately, atopic dermatitis is an uncomfortable, common and chronic condition. Patients should be warned of the potential cancer risk and carefully monitored clinically when taking the drugs. Any patient with nonresolving lymphadenopathy should be appropriately investigated. The lowest concentration of the drugs needed to control a patient’s symptoms should be used. Unnecessary and potentially harmful ultraviolet exposure (from the sun and tanning beds) should be avoided.

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**IN THE LITERATURE**

**Does coronary revascularization before major vascular surgery decrease mortality?**

McFalls EO, Ward HB, Moritz TE, Goldman S, Krupski WC, Littooy F, et al. Coronary-artery revascularization before elective major vascular surgery. N Engl J Med 2004;351(27):2795-804.

**Background:** Evidence gathered over the last 30 years has permitted stratification of patients undergoing noncardiac surgery into categories of high, intermediate and low cardiac risk1-3 and clarified the effectiveness of medical interventions, principally β-blockers, in reducing perioperative complications.4 However, until now, the benefit of preoperative coronary revascularization (through percutaneous angioplasty or bypass surgery) has not been studied in a randomized trial. Guidelines recommend conservative management for patients with stable coronary artery disease and low-risk coronary anatomy,1 but practice variation occurs. This randomized trial is therefore an important addition to an evidence-based approach to the management of such patients.

**Design:** This study enrolled 510 patients from 18 US Veterans Affairs medical centres (98% male) between 1997 and 2003. Subjects were scheduled for elective vascular surgery (33% for an expanding abdominal aneurysm, 67% for symptomatic arterial occlusive disease of the legs). To receive cardiac catheterization, patients had to be deemed at increased risk of perioperative cardiac complications by a cardiologist. Those who had angiographic evidence of stenosis greater than 70% in at least 1 coronary artery were eligible. Exclusion criteria included severe coexisting illness, previous revascularization without evidence of recurrent ischemia, stenosis greater than 50% of the left main coronary artery, a left ventricular ejection fraction of less than 20% and severe aortic stenosis. Patients were randomly assigned to coronary artery revascularization (CAR) before surgery or to no revascularization. Percutaneous coronary intervention was performed on 59% of the patients and coronary artery bypass surgery on 41%. The primary end point was long-term mortality, with a minimum follow-up of 1 year and a median follow-up of slightly over 2.5 years.

**Results:** Of the study patients, 74% demonstrated a moderate or large reversible defect on stress imaging or were considered to be at intermediate or high cardiac risk according to the criteria of Eagle1 or Lee and associates.5 Before vascular surgery, there were 10 deaths in the CAR group and 1 death in...
the no-CAR group. However, 30-day mortality was similar in both groups (3.1% and 3.4% respectively). At a median of 2.7 years after randomization, mortality was 22% and 23% for the CAR and no-CAR groups respectively (relative risk 0.98, confidence interval 0.70–1.37). There were no differences in 30-day postoperative myocardial infarction rates between the 2 groups. Patients assigned to CAR had a significant delay before receiving their vascular surgery procedure. An attempt to identify whether high-risk subjects within the study group might benefit more from CAR revealed no significant findings.

**Commentary:** This large and well-designed randomized study provides strong evidence in support of the recommendation against prophylactic coronary revascularization in patients with stable coronary artery disease scheduled to undergo elective major vascular surgery.

The limitations of this study include its lack of generalizability given the predominance of male patients and exclusion of patients with known left main coronary artery disease, severe aortic stenosis and left ventricular dysfunction. Further, although the study included patients who would be deemed high risk using clinical risk scores, it lacked sufficient power to determine whether the intervention would help them. Finally, the trial lacked long-term follow-up. As the authors note, previous work has shown that bypass surgery is superior to percutaneous intervention after 5 years among patients with multivessel disease and diabetes. It is possible that high-risk patients scheduled to undergo preoperative vascular surgery, particularly those with diabetes, may benefit from surgical revascularization. Confirming this would require a much more specific randomized trial.

**Practice implications:** The results of this study support current guidelines by providing strong evidence that prophylactic coronary revascularization before elective major vascular surgery does not improve long-term survival of patients with stable coronary artery disease. Clinicians should be reassured that patients with apparently stable coronary artery disease, who are appropriately treated with β-blockers, antiplatelet agents, angiotensin-converting-enzyme inhibitors and statins, do not require preoperative revascularization. Despite the plethora of coronary screening tests available for such patients, physicians should also be reassured that their clinical judgement may still be the most important tool in determining stability of coronary artery disease and which, if any, patients must be screened and by what method.

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