

thus less accurate) would be expected from its marginally lower sensitivity estimate.

In clinical practice, we know now that effective antiretroviral treatment reduces HIV-related morbidity and mortality,<sup>10</sup> and through the reduction of the population viral load, such therapy can potentially contribute also to the prevention of transmission.<sup>11</sup> A crucial link between this scientific evidence and the desirable clinical and public health outcomes is the promotion of access to an accurate point-of-care rapid HIV test (figure).<sup>12</sup> Oral fluid-based Oraquick offers the attraction of being more convenient and non-invasive. However, although its better acceptability might promote access to HIV screening, this seems to be at the cost of a substantial false-positive rate,<sup>1,6</sup> even though the estimated specificity of 99.74% might have dwarfed that of most other diagnostic tests in use. This factor must be considered for test interpretation, especially when the availability of such a rapid test allows penetration of screening programme into lower-risk groups. Being dependent on host immunological responses, substantial biological variations would be expected for Oraquick both for oral and blood specimens in the presence and timing of a positive result. Repeat testing after the window period or use of an alternative test is indicated if clinical suspicion remains high despite an initial negative test. Similarly, confirmatory testing is generally thought necessary for a diagnosis with such major implications, even in view of a relatively low chance of false-positive results.

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## The end of postoperative antimicrobial prophylaxis?

In *The Lancet Infectious Diseases*, Hiroshi Imamura and colleagues<sup>1</sup> report data from a randomised controlled trial of antimicrobial prophylaxis in patients having distal gastrectomy for cancer. Patients were randomly assigned to receive 1 g of cefazolin before the incision only or an additional dose once after closure and twice daily for 2 days after surgery. The rates of surgical-site infection were much the same between groups: 9% in the extended treatment group and 5% in the intraoperative alone group. The investigators conclude that postoperative antimicrobial prophylaxis is not recommended for patients undergoing surgery to treat gastric cancer.

This study adds to the data showing the lack of efficacy for postoperative prophylactic antibiotics after closure of the surgical incision, at least in patients with an intact immune system.<sup>2,3</sup> A large meta-analysis<sup>2</sup> including patients having various surgical procedures showed no difference in rates of surgical-site infections between single and multiple doses of prophylactic antibiotics. A Japanese randomised controlled trial<sup>3</sup> of single-dose versus multiple-dose antimicrobial prophylaxis in 501 patients undergoing gastric cancer surgery also showed no benefit to multiple doses. Furthermore, prolonged prophylactic administration leads to increased risks of *Clostridium difficile* disease and antimicrobial resistance.<sup>4</sup>



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Two points should be borne in mind when interpreting the data presented by Imamura and colleagues: the study design, and the extent of extended prophylaxis worldwide. In the study, surgeons were not masked to the treatment assignment of each patient and were responsible for identifying any infections occurring after hospital discharge. Thus, the potential for bias exists. As practicing surgeons, however, we find the data compelling. We are convinced that the outcomes are close to what one would expect in general surgical practice if either of these approaches to antibiotic use were uniformly adopted, and the whole study itself might eventually be classified in the discipline of comparative effectiveness research.

Second, although the investigators point out that extended prophylaxis is commonly practiced in their home country of Japan, this practice has been prohibited in the USA for the past decade and is monitored closely as a measure of quality of care. In 2002, the Surgical Infection Prevention project was initiated under the direction of the Centers for Medicaid and Medicare and the Centers for Disease Control and Prevention.<sup>5</sup> On the basis of data showing a widespread lack of compliance with evidenced-based guidelines for prevention,<sup>6</sup> the aim of the project was to reduce the nationwide incidence of surgical-site infections in the USA through systems-level protocol implementation.<sup>7-9</sup> One explicit intervention derived from that initiative was the discontinuation of prophylactic antibiotics within 24 h of an operation. Baseline nationwide data at the initiation of the project showed that antimicrobial prophylaxis was discontinued within 24 h of surgery for only 40.7% of patients.<sup>10</sup> Nationwide compliance with this measure now ranges from 84–87%.<sup>11,12</sup> In our own hospital, monthly compliance varies from 95–100%, and any failure of compliance results in a letter of notification sent to all surgeons and anesthesiologists involved in the procedure. Receiving one of these letters is now viewed as a small but definite dishonour.

Overall, these data from Imamura and colleagues are the latest in a long line of studies that show no benefit of antibiotics given after surgical wound closure. The

study is unlikely to have a major impact in the USA and other countries where the maximum duration of perioperative antibiotics is limited to 24 h and is carefully monitored and regulated. However, in both the quality control and surgical training environments, this work will be useful to convince sceptical surgeons that our guidelines are based on real data derived from real patients. For other countries where these practices have not yet been uniformly adopted, including Japan, the potential for beneficial change is enormous. The authors should be applauded for their important contribution.

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