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staphylococci are clindamycin resistant, and some (albeit a small minority) are resistant to tetracyclines and/or trimethoprim-sulfamethoxazole. Moreover, diabetic foot infections, particularly more severe episodes, may involve gram-negative bacilli, which have highly unpredictable susceptibility patterns. Consequently, swab cultures from infected skin ulcers (notwithstanding their nonspecificity) and cultures of abscess pus can yield clinically important information in the appropriate context. The favorable emphasis Jenkins et al give in the abstract to the observed “significant decrease in use of microbiological cultures” (which refers primarily to blood cultures, not wound cultures) might lead the casual reader to conclude, one hopes erroneously, that these authors believe wound (or pus) cultures should be avoided generally in patients with cellulitis or skin abscesses. On the contrary, in this era of increasing antimicrobial resistance, wider use of such cultures probably should be encouraged, particularly with compromised hosts, to allow just the sort of targeted therapy Jenkins et al appropriately support.

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In reply

We appreciate the letter by Dr Johnson in response to our study describing the impact of a clinical practice guideline on antibiotic and health care resource utilization for inpatient cellulitis and cutaneous abscesses. He suggests that our phrasing, “significant decrease in the use of microbiological cultures,” may inadvertently discourage providers from obtaining appropriate cultures. To clarify, in our guideline

### Table. Relative Risk (RR) of a Cardiovascular Event Potentially Accounted for by an Association With Opioid Use After Adjustment for Unmeasured Tobacco Use

<table>
<thead>
<tr>
<th>Assumed Increase in Prevalence of Tobacco Use in the Opioid Group, %</th>
<th>Assumed RR of a Cardiovascular Event Associated With Unmeasured Tobacco Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>1.66</td>
</tr>
<tr>
<td>100</td>
<td>1.56</td>
</tr>
<tr>
<td>150</td>
<td>1.47</td>
</tr>
</tbody>
</table>

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Do Not Abandon Cultures

Jenkens et al are to be commended on achieving significant reductions in the duration of antimicrobial therapy and decreased use of broad spectrum agents among patients hospitalized for uncomplicated skin infections, through the use of a management algorithm. However, as noted in the accompanying commentary with respect to the authors’ treatment algorithm, more emphasis may be warranted on the “uncomplicated” study inclusion criterion. In particular, the authors’ advocacy for avoiding (presumably unnecessary) microbiological tests should not be applied inappropriately to other populations with skin infections, in whom such tests, particularly wound cultures, can be extremely helpful in selecting step-down oral therapy. For example, group B streptococci, a not uncommon cause of foot infections among patients with diabetes mellitus or peripheral vascular disease, are usually resistant to tetracyclines, including doxycycline. Likewise, group A streptococci are unreliablely responsive to trimethoprim-sulfamethoxazole. Similarly, many methicillin-resistant...
published as an eFigure along with the article, we advocate performing cultures for all abscess drainage procedures and the selective use of blood cultures and we discourage use of wound swab cultures.

We agree with Dr Johnson that culture of pus from an abscess allows appropriate narrowing of empirical therapy when an organism besides methicillin-resistant Staphylococcus aureus predominates, or less commonly, broadening of therapy to treat uncommon infecting pathogens. In contrast, blood cultures are of lower yield for skin infections, positive in less than 5%, and may not alter management; thus, their routine use is not recommended in national guidelines. To discourage the reflexive ordering of blood cultures for patients with relatively uncomplicated cellulitis or abscess that we observed during the preintervention period, we set forth specific criteria for use of blood cultures—fever, diabetes mellitus, or other immunosuppressive disorder—in which the yield was likely to be higher. Such targeted use of blood cultures equates to fewer overall cultures and thus should result in fewer of the inevitable false-positive cultures that lead to unnecessary antimicrobial therapy and increased length of stay. Dr Johnson asserts that wound swab cultures yield clinically important information and concludes that they should be used more widely. Although he discusses their use in the context of infected ulcers, conditions that were excluded from our study, we disagree with his overall conclusion. Chronic wounds are commonly colonized with multidrug-resistant pathogens that are not involved in an infection; therefore, swab cultures can erroneously lead to an even broader spectrum of antibiotic therapy than is typically used to treat such infections. Because of this, authorities do not recommend routine swab cultures during the management of infected ulcers.

In conclusion, we agree with Dr Johnson that microbiological cultures are a critical tool to the clinician treating skin infections and should not be abandoned, but we caution that like antibiotics, they should be used appropriately to avoid unintended consequences.

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Uncertainties in the Dose From Full-Body Airport Screening

There is considerable uncertainty in the effective dose from Compton backscatter screening systems. The value of 0.1 µSv that Mehta and Smith-Bindman1 used is taken from the limit to effective dose per scan set in the 2002 version of the NS 43.17 standard.2 Because a screening involves 2 scans, the effective dose per screening is 0.2 µSv. In the 2009 revision to NS 43.17, the limit for the effective dose per screening was increased to 0.25 µSv.3 On this basis, the estimates of the number of cases by Mehta and Smith-Bindman3 should be at least 12 per year.

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Although the NS 43.17 effective dose limits are higher than those derived from measurement, there is good reason to believe that the procedures used by National Institute of Standards and Technology (NIST),4 John Hopkins Applied Physics Laboratory (JHL),5 and the Transportation Security Administration (TSA) lead to underestimates of exposure and hence dose. Measurement of the dose from these systems is challenging. Although the dose is low, the dose rate is very high, in excess of the maximum exposure rate for the ion chambers used. The very high measurements of scatter dose reported in the JHL6 report (36% above the cabinet, 19% in a position near the entrance) suggest that the scanning beam effective doses of 0.024 µSv are implausibly low. Typical scatter doses are approximately 1% to 2% of the primary dose.

Alternatively, doses can be estimated from the images themselves. On the basis of contrast and resolution in published images, Rez et al9 estimated the entrance skin dose as 2.5 µGy and the effective dose as 0.88 µSv. Taking into account the possibility that effective doses are closer to 1 µSv, Brenner7 has estimated that up to 100 cases of fatal cancers will be induced per year on the basis of 2 screenings per trip. Using the standard risk of cancer mortality of 5% per sievert, Brenner7 estimated that 100 cases of fatal cancers will be induced assuming 2 screenings per trip

I question the accuracy of the estimate for breast cancer. Dose to the breast is not mentioned in the NIST report4 referenced by Mehta and Smith-Bindman.1 Given that BEIR (Biological Effects of Ionizing Radiation) VII8 bases risk on organ dose, one would expect the relevant dose to be closer to the entrance skin dose than the effective dose. The dose from the low-energy (28 keV average, 50 kV[p]) x-rays falls off rapidly with depth and the entrance skin dose is approximately 6 times higher than the reference effective dose.4 Accordingly, one would expect that Mehta and Smith-Bindman3 underestimate cases of breast cancer by a factor of 6.

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