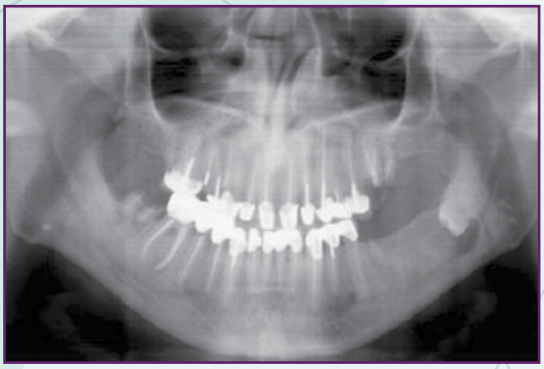
Test Your Reading Comprehension

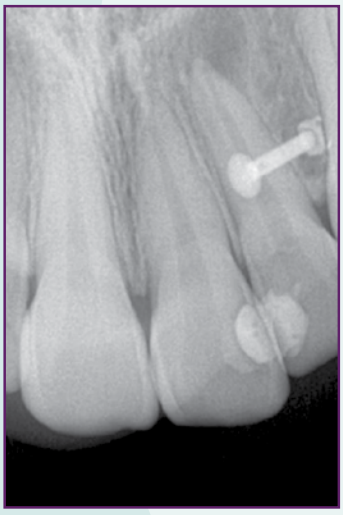


Case 1

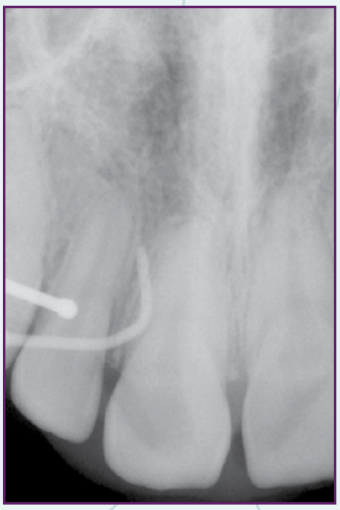
How well can you interpret what's visible in dental radiographs?

Most of our day-to-day cases are straightforward; we can see patient issues in both the mouth and the radiograph. But what happens when they don't match? The problem is likely not the scans themselves, but the usage of the software and practitioner's interpretation of the scanned image.

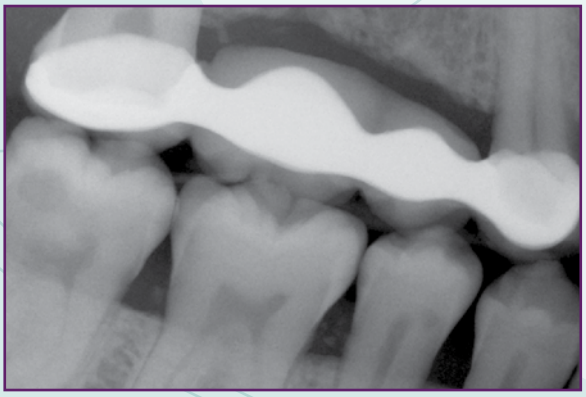
To test your ability to interpret disease versus artifacts, we've collected these nine images. Can you correctly identify the disease or artifact represented in each? (See pages 52-53 for the answers, and a discussion on how to troubleshoot images.)



Case 2



Case 3



Case 4

by Manoranjani Sambangi, DDS

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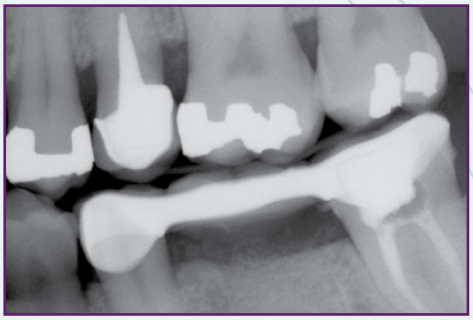
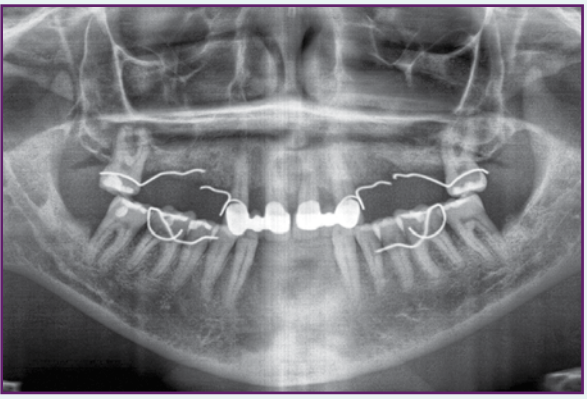
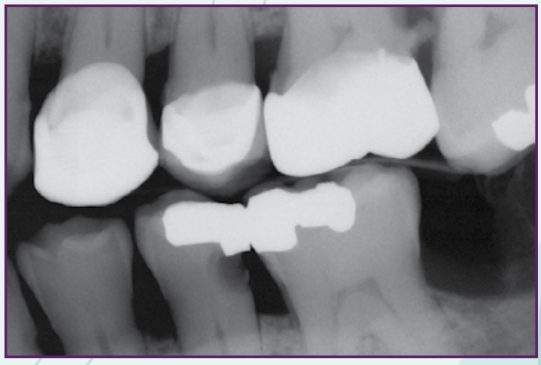


Case 5

Case 7

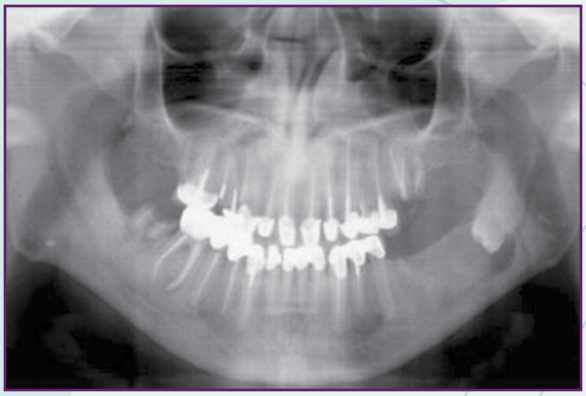


Case 6



Case 9

Case 8



Case 1: A dentigerous cyst is on the lower left of this panoramic image.

Tech Tips

Radiology can be a powerful tool to aid dentists in diagnosis and treatment planning. These best practices can help you utilize this technology more successfully.

Master the technology

Take the time to learn how to use your radiography system most effectively. As with most technologies, the system used in one office may differ from the next; it's important to invest time in learning the technology.

Develop a process

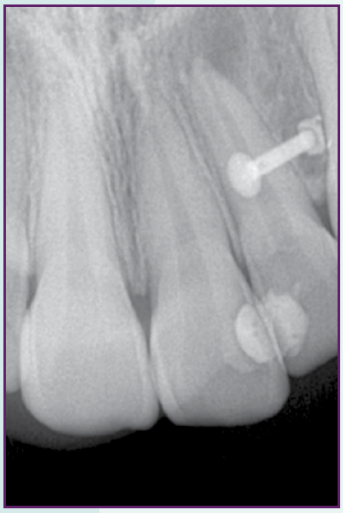
Developing a process for evaluating radiographs is essential. By following the same pattern for evaluating them each and every time, practitioners can prevent missing any details. It's easy to miss decay, an abscess or other pathology when our patients don't complain of symptoms.

Combine with clinical evaluation

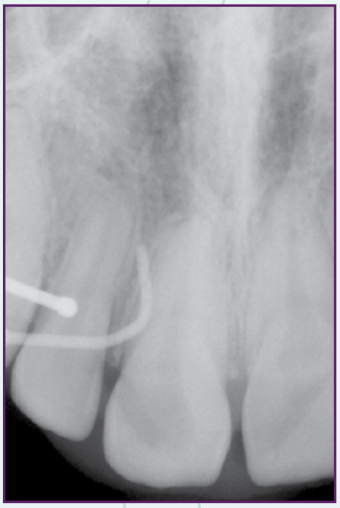
Disease can present clinically but not show up in radiographs, and vice versa. Ensure a good diagnosis for your patients by combining radiograph findings with a comprehensive clinical evaluation that includes flossing, exploring, probing, percussion, palpation, caries detection, differential diagnosis and other accepted practices.

Common Mistakes

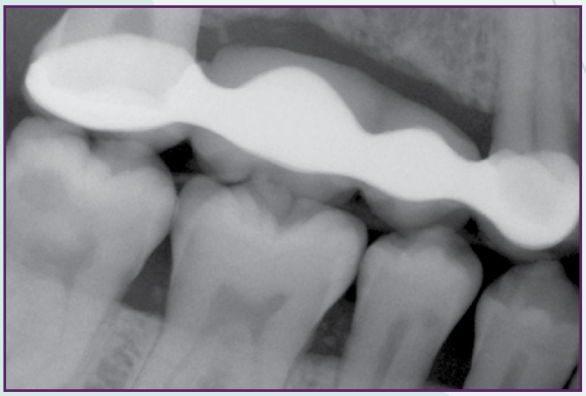
- The most common tooth surfaces missed when taking radiographs are mesial of the first premolars and the distal of canines.
- A lining used under a filling may be radiolucent and mistaken for decay. Decay often looks hazy with poorly defined margins; prepped surfaces have clear, crisp margins. ■



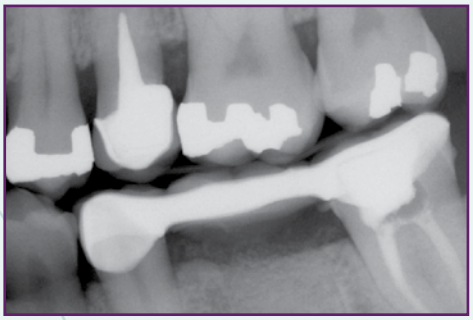
Case 2: There's a periapical abscess on tooth 10. The bar-shaped image is a nose piercing.



Case 3: This image shows another nose piercing, a common artifact found in radiographs.

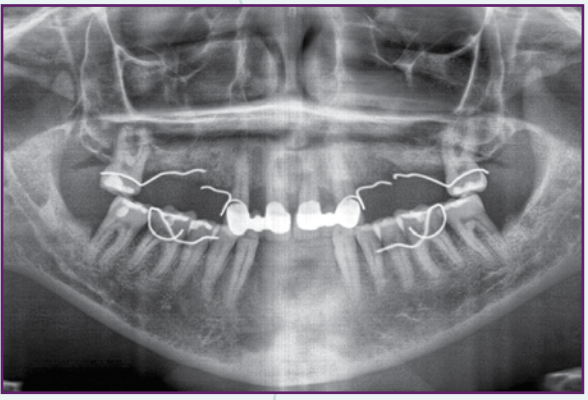


Case 4: Do you see cement on the mesial of tooth 2? It was left behind when cementing the bridge, resulting in extreme sensitivity, pressure, pain and swollen gums. Artifacts can be seen between 29 and 30, and 30 and 31.



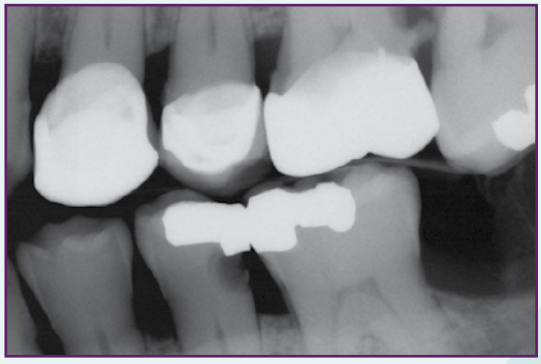
Case 5: This patient has calculus on the distal of 18; the mesial on the same tooth is most likely retained cement. Bone-graft material can be seen floating on the missing 19.

Case 7: This radiograph shows a fracture in 10.



Case 6: The patient is wearing a stayplate in this panoramic image.

Case 8: This patient in this panoramic image has an anterior cyst. In this case, 3-D imaging was used to obtain a clearer view before treatment planning.



Case 9: Gross decay on 20 and calculus between 14 and 15. Because of crowned teeth, this is a case where the radiograph didn't show all signs of disease. Upon probing, 12 and 13 had 6mm pockets. The explorer could feel soft tooth inside the distal margin of 12 and the mesial margin of 13. Distinct halitosis presented when the distal of 12 was probed. The patient felt slight pain upon percussion of 12. The patient agreed to treatment after the clinical concerns in this area were explained. Upon opening 12, it was found to be grossly decayed and needed to be extracted. Decay was also present under the mesial margin of 13 and the distal of 11. After extracting 12, a bridge was placed on 11–13.