AUSTRALIAN
DENTAL COUNCIL

ADC Written Examination Practice Paper

Acknowledgment of Country

The Australian Dental Council (ADC) acknowledges the Wurundjeri peoples of the Kulin Nations as the Traditional Owners of the land on which our administration and examination centre sits.

We also acknowledge that our business operates across Australia, on the unceded lands of the oldest continuing cultures in the world. We pay our respects to each of the Clans, Language Groups and Nations of Aboriginal and Torres Strait Islander Australia.

We acknowledge and pay respect to their Elders, ancestors, cultures, and heritage and recognise their ongoing connection to culture, land, and community.

Introduction

Questions in this practice paper are derived from questions retired from the ADC item bank. They contain a mixture of scored and unscored questions which may have been included in examinations for the purposes of validation. Questions in this booklet will not be used again in future ADC examinations.

The ADC uses scenario based multiple-choice question (MCQ) items for the written examination. A scenario based MCQ item has an overarching clinical vignette, with five multiple-choice questions attached. Each multiple-choice question has a single best answer and relates to the information outlined in the clinical vignette.

Contents

Clinical scenarios have been grouped by profession according to scope of practice.

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Dental hygiene: clinical scenarios 28 to 31
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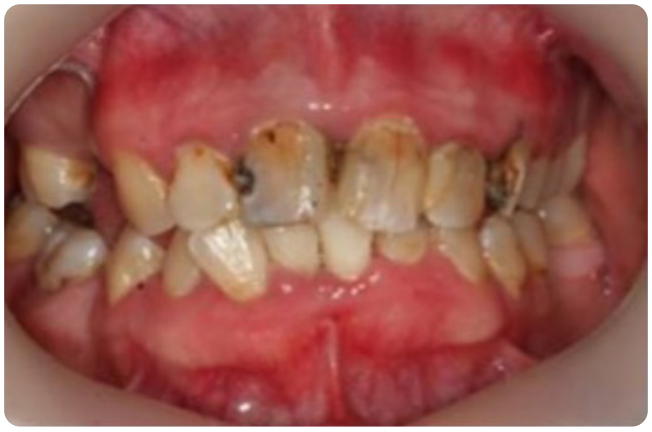
Dental prosthetics: clinical scenarios 39 to 40

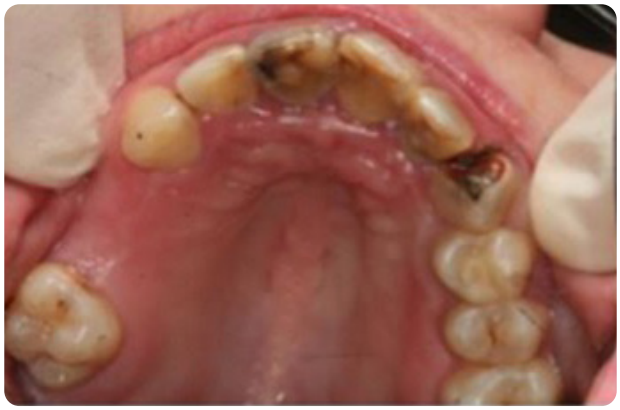
Clinical scenario 1

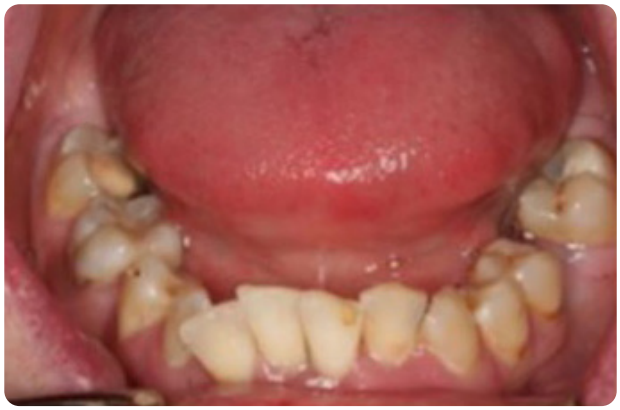
Question 1 through to 5 refer to the following information

Nancy is a 45-year-old female who has tooth pain every now and then and is unhappy with the way her teeth look.

Her last visit to a dentist was six years ago, at which stage she had no obvious dental disease. Nancy is taking a beta-blocker for hypertension started three years ago by her general practitioner.







1. Nancy tells you that she is keen to regain her oral health so she can eat properly.

What is the most likely explanation for the recent deterioration in her dental health?

A. Moving to a non-fluoridated community
B. Changes in her saliva
C. Previous history of poor-quality restorative treatment
D. Using a hard-bristled toothbrush

2. Nancy indicates that tooth 23 gives her "pain every now and then".

In addition to pulp sensibility testing using 'dry ice', what clinical investigation would most assist in making a diagnosis?

A. Periodontal probing
B. Sensibility testing using hot water
C. Percussion testing
D. Transillumination
E. Mobility testing

3. What restorative principle is the most important in ensuring a favourable prognosis for tooth 23?

A. Shade matching
B. Obtaining a marginal seal
C. Total caries removal
D. Establishing canine guidance

4. Nancy asks you about full-mouth vital tooth bleaching as she has seen advertising which has convinced her that she needs to have it done.

If Nancy opts to proceed with this, what is the most appropriate stage of treatment for her to have this done?

A. Prior to any other treatment
B. Immediately after removal of all calculus
C. After the placement of temporary restorations
D. After the placement of definitive restorations
E. After completing all other treatment

5. Nancy also mentions she is interested in having teeth 14 and 15 replaced with implants and crowns; her friend had recent successful and aesthetically pleasing implant placements for her two upper incisors.

What is the most likely issue that may impact the ability to proceed with implant placement for Nancy?

A. Bone quantity may be inadequate
B. Mesio-distal space may be inadequate
C. Vertical space may be inadequate
D. The maxillary sinus may extend to the premolar region

Clinical scenario 2

Question 6 through to 10 refer to the following information

Betty, a 70-year-old female, comes to your practice for a check-up.

You learn that Betty is recently widowed and lives in a residential care facility in an area with fluoridated reticulated water. Upon questioning, you discover that Betty prefers drinking bottled water rather than tap water as she does not like the taste.

While taking a patient medical history, you learn that Betty has Sjögren's syndrome.

Your examination findings reveal multiple root caries lesions. You opt to do a saliva test and discover that Betty has viscous saliva, low saliva flow and low acid buffering capacity.

6. What is the most important part of Betty's patient history to consider when determining Betty's caries risk factor?

A. Socioeconomic status
B. Preference for drinking bottled water
C. High carbohydrate diet
D. History of Sjögren's syndrome
E. Loss of interest in personal care

7. During your examination, you found a white spot lesion on tooth 11 in the cervical region. You noted that this non-cavitated lesion was easily detected on the wet enamel.

In addition to providing oral hygiene instruction, what is the most appropriate management for this lesion?

A. Restore the lesion with glass-ionomer cement
B. Topical application of a remineralising agent
C. Recommend use of a salivary substitute
D. Monitor the lesion at the six-month recall

8. Betty mentions that she brushes her teeth with a fluoridated toothpaste every day.

In addition to brushing and flossing, what is the most appropriate supplemental oral care regimen to recommend to Betty to manage her caries risk?

A. Casein phosphopeptide–amorphous calcium phosphate cream
B. Bicarbonate mouthwash
C. 9000 ppm fluoride mouthwash
D. A salivary substitute

9. What is the most important action to take to decrease the caries risk for Betty?

A. Provide education in plaque control
B. Provide advice on how to alter modifiable caries risk factors
C. Encourage chewing sugar free gum to increase salivary flow
D. Conduct a dietary analysis

10. When discussing Betty's preference for drinking bottled water, she insists that she does not want to switch from bottled water to tap water.

What is the most appropriate advice to give to Betty regarding her water consumption?

A. Betty should continue to drink standard bottled water only
B. Betty should add bicarbonate soda to the bottled water
C. Betty should drink bottled water containing fluoride
D. Betty should drink bottled water containing the word 'mineral' on the label

Clinical scenario 3

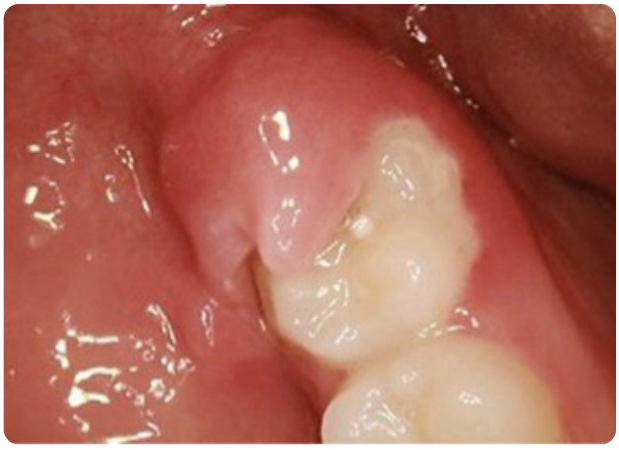
Question 11 through to 15 refer to the following information

Andrea is a 19-year-old student who presents to your practice with painful, partially erupted, mandibular third molars.

On initial examination you note the operculum over tooth 48 is swollen and tender. The operculum over tooth 38 has the same appearance.

You also note that the submandibular lymph nodes are enlarged and tender.

Andrea's medical history indicates that she is immunocompromised.



11. What is your recommendation to Andrea as the most appropriate mouthwash, as part of the management of her painful wisdom teeth?

A. Essential oil
B. Povidone iodine
C. Hydrogen peroxide solution
D. Chlorhexidine gluconate
E. Sodium bicarbonate

12. You subsequently prescribe penicillin for Andrea and the following day she presents to your practice again, complaining of an itchy rash all over her body.

After advising Andrea to stop taking the penicillin, what is the most important thing to do next to manage her reaction?

A. Give her adrenaline
B. Prescribe her amoxicillin instead of penicillin
C. Prescribe her systemic steroids
D. Prescribe her antihistamines

13. What radiographic modality is indicated as a first choice in planning for removal of her mandibular wisdom teeth?

A. Panoramic radiograph
B. Cone-beam computed tomography (CBCT)
C. Periapical radiographs
D. Occlusal radiograph

14. You plan to remove Andrea's lower wisdom teeth as an elective procedure. Andrea's treating doctor has advised that she requires surgical antibiotic prophylaxis for her wisdom teeth extraction.

Which surgical antibiotic prophylaxis regimen would be most appropriate to prescribe Andrea?

A. Ampicillin 300mg, one hour before surgery
B. Clindamycin 600mg, one hour before surgery
C. Metronidazole 400mg, one hour before surgery and continue 12-hourly for 5 days
D. Erythromycin 500mg, one hour before surgery and continue six-hourly for 10 days
E. Amoxicillin 500mg and clavulanic acid 125mg one hour before surgery

15. The next appointment Andrea can attend to have her mandibular wisdom teeth extracted is two weeks away.

What is the most appropriate local management that can be provided to Andrea in the interim?

A. Local debridement of the operculum and irrigation with 1% hydrogen peroxide
B. Excision of the inflamed tissues around the mandibular wisdom teeth
C. Pain management with paracetamol and ibuprofen
D. Advise Andrea to rinse with warm salty water at home

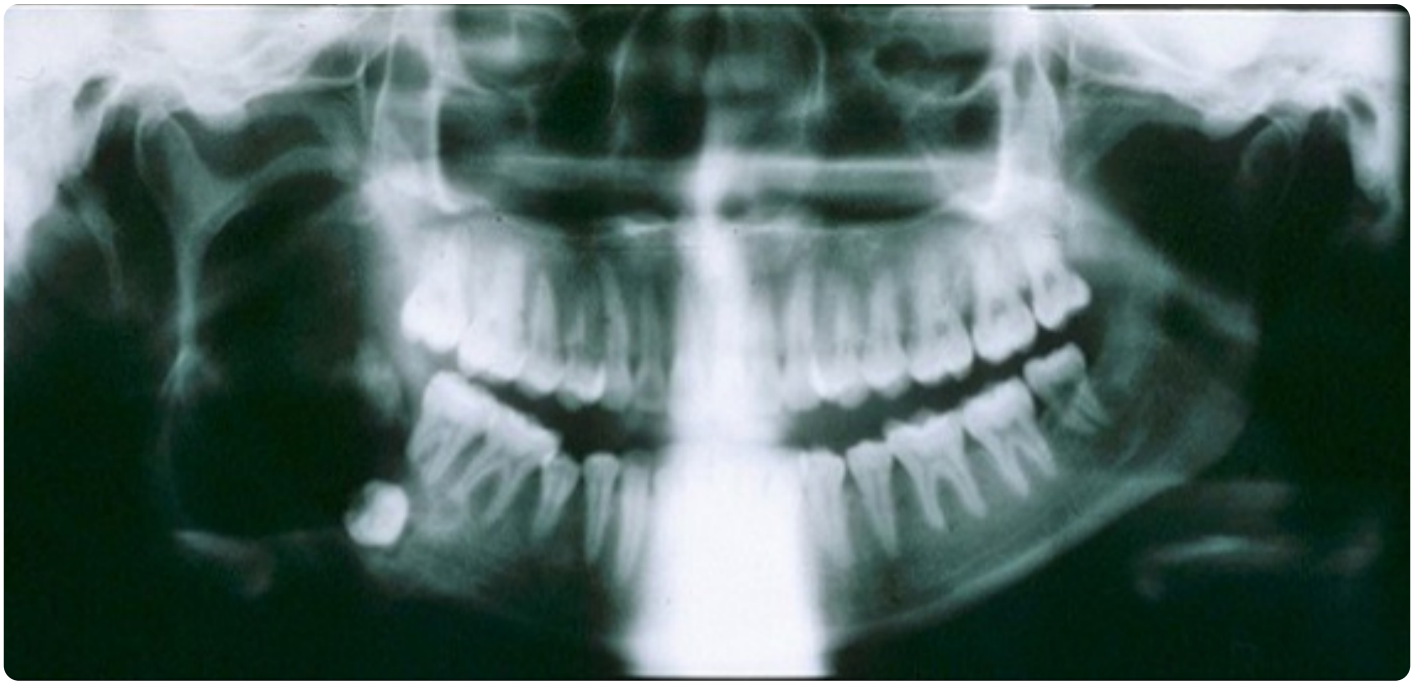
Clinical scenario 4

Question 16 through to 20 refer to the following information

Brian is a 30-year-old electrician who rarely visits the dentist. He has been aware of slight discomfort in the right mandibular area for a couple of years. Recently he noticed that the discomfort had become a continual dull ache and he seeks your advice.

Brian's medical history reveals that he takes insulin for type 1 diabetes which appears to be well controlled. Otherwise, his medical history is unremarkable.

You take a panoramic radiograph which shows a significant radiolucency in the right-hand side ramus.



16. What complication has affected the adjacent teeth as a result of the presence of the radiolucent mandibular lesion?

A. External resorption of tooth 47
B. Tooth decay on the distal surface of tooth 47
C. Deep pocket distal to tooth 47
D. Displacement of tooth 47

17. What is the most likely diagnosis for Brian's presenting symptoms?

A. Metastatic tumour
B. Keratocystic odontogenic tumour
C. Radicular cyst
D. Haemangioma

18. Which additional image would provide the most optimal information to assist in diagnosing Brian's condition?

A. Cone-beam computed tomography
B. Lateral oblique radiograph
C. Periapical radiograph
D. Magnetic resonance imaging

19. You inform Brian that any increase in the size of the lesion could have serious consequences.

What is the most conservative management to recommend for Brian?

A. Continued observation
B. Cryosurgical procedure
C. Enucleation and extraction of tooth 48
D. Mandibular osteotomy

20. On Brian's panoramic radiograph you notice another mandibular radiolucency around the roots of tooth 38.

What would the most appropriate initial course of action be in order to address this?

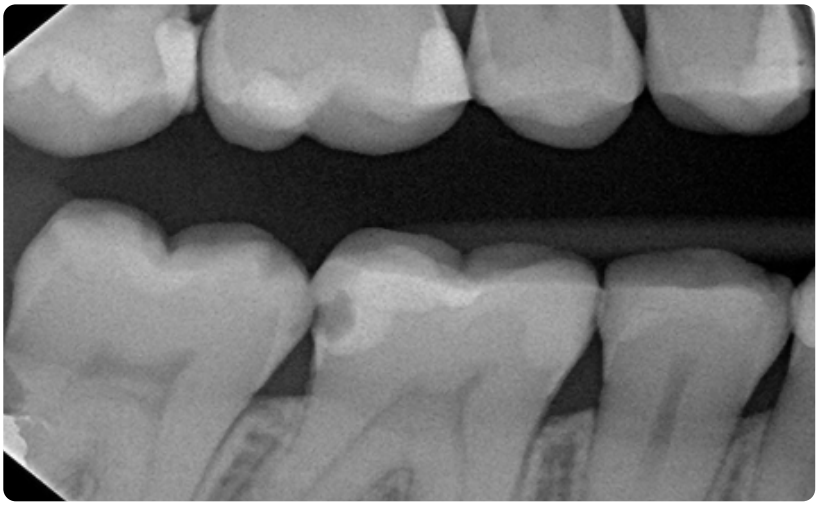
A. Perform pulp sensibility test
B. Perform root canal treatment
C. Monitor the lesion
D. Extraction

Clinical scenario 5

Question 21 through to 25 refer to the following information

Ms Khatri presents for a check-up, with no particular complaints. She has a large number of resin composite restorations.

You decide to obtain bitewing radiographs. The right side is shown.



21. On examining the right bitewing radiograph, you note a radiolucency affecting the distal surface of tooth 46.

What symptoms would Ms Khatri be most likely to indicate she is experiencing in relation to this tooth?

A. Sensitivity to biting pressure
B. Sensitivity to cold stimulus
C. Sensitivity on eating
D. Sensitivity to hot stimulus
E. No sensitivity

22. You also observe a radiolucency on the mesial surface of tooth 47 and during the distal cavity preparation of tooth 46, you are able to directly assess the mesial surface of tooth 47.

What is the primary factor that should be considered when deciding whether to surgically manage mesial surface of tooth 47 and place a restoration?

A. The radiographic appearance of enamel
B. The progress of caries into dentine
C. The degree of demineralisation
D. The presence of cavitation
E. Ms Khatri's oral hygiene

23. On further examination of the radiograph, where else can radiolucencies be detected affecting enamel and dentine in an unrestored tooth that will need to be managed?

A. Distal surface of tooth 14
B. Distal surface of tooth 15
C. Mesial surface of tooth 17
D. Distal surface of tooth 45
E. Occlusal surface of tooth 47

24. If your overall management of Ms Khatri's early carious lesions involves treatment to encourage remineralisation, what approach would be most effective in making Ms Khatri's enamel less acid soluble?

A. Application of topical fluoride gel yearly
B. Increased consumption of cheese and milk in her diet
C. Increased daily water intake
D. Use of fluoride tablets
E. Brushing twice a day with a 1200ppm fluoride toothpaste

25. What is the main technical problem with using this bitewing radiograph for assessment of Ms Khatri's teeth and periodontal support?

A. Cone cut on the distal aspect
B. Failure to include the distal surfaces of the canines
C. Orientation of the occlusal plane
D. Tube angulation
E. Failure to occlude on the film holder

Clinical scenario 6

Question 26 through to 30 refer to the following information

Ms Ibrahim is a healthy 45-year-old woman who has come to see you today regarding an abscess related to tooth 36. She complains that she has a foul taste in her mouth. She tells you that the tooth feels "heavy and uncomfortable," but that she has not experienced severe pain, a fever or facial swelling.

Your records confirm that you last saw Ms Ibrahim 12 months ago when you partially extirpated the pulp, dressed the radicular pulp with calcium hydroxide and placed a temporary glass-ionomer cement restoration. When you ask why she did not return to have the treatment completed, Ms Ibrahim advises you that she was travelling.

On examination today, you observe that the temporary restoration on tooth 36 has dislodged, with evidence of caries under the restoration and a chronic fistula around the furcation area. You also take a periapical radiograph (Figure 2) and compare it to the periapical radiograph taken 12 months ago (Figure 1).

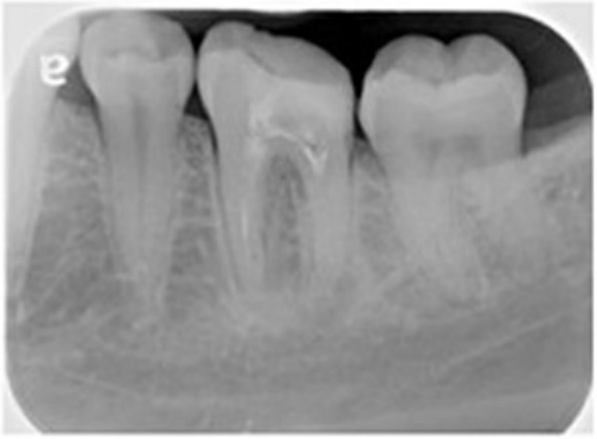


Figure 1

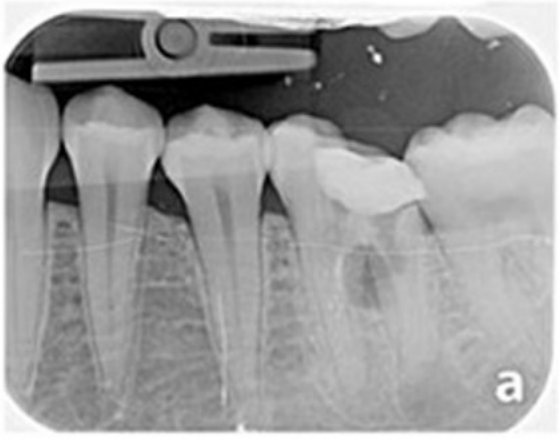


Figure 2

26. What is the most likely reason for the difference in the appearance of the bone in the two radiographs?

A. Aggressive periodontitis
B. Caries
C. Poor oral hygiene
D. Food-packing
E. Chronic localised infection

27. In addition to the periapical radiograph you have taken today, what clinical investigation will provide you with the most relevant diagnostic information regarding Ms Ibrahim's tooth 36?

A. Percussion test
B. Periodontal probing test
C. Assessment of healthy dentine
D. Crack finder test

28. You advise Ms Ibrahim that extraction of tooth 36 is her best option. She wants to know if an edentulous space can be left.

What further information would be required to best assist in responding to Ms Ibrahim's question?

A. Aesthetic consequences
B. Periodontal status
C. Density of mandibular bone
D. Status of abutment teeth
E. Occlusal stability

29. Ms Ibrahim asks about surgical complications.

What is the most likely complication that may be encountered during the extraction procedure?

A. Spreading of the infection
B. Inability to obtain adequate anaesthesia
C. Damage to adjacent teeth
D. Fracture of the root
E. Damage to the lingual nerve

30. What is the best way to manage the extraction of tooth 36, given the presence of periapical and periodontal infection?

A. Antibiotics, three days prior and two days after the extraction
B. Antibiotics commencing immediately after the procedure
C. A single preoperative dose of an appropriate antibiotic
D. Curettage of granulomatous tissue and irrigation with sterile hydrogen peroxide
E. Post-operative instructions, including rinsing with salty water

Clinical scenario 7

Question 31 through to 35 refer to the following information

George, 52 years-old, presents to your clinic with a toothache on the lower right-hand side.

Upon examination and testing, you determine a provisional diagnosis of irreversible pulpitis.

You discuss the available treatment options with George and he elects for root canal treatment of tooth 46.

31. You have administered a highly efficacious inferior alveolar, lingual and long buccal nerve block. After 15 minutes, George has profound numbness of the lower right lip and right side of the tongue, but tooth 46 feels very painful when you attempt to initiate endodontic access.

What supplementary injection would be most effective to ensure pulpal anaesthesia prior to commencing treatment for tooth 46?

A. Another inferior alveolar nerve block in a more superior position
B. An infiltration in the lingual sulcus of tooth 46
C. A buccal infiltration distal and below the apex of tooth 46
D. Intra-ligamentary injections adjacent to tooth 46

32. When completing a risk assessment for the endodontic procedure, you noted that the pulp chamber of tooth 46 appears receded, due to pulp calcifications.

What anatomical landmark can most predictably assist you to locate the floor of the pulp chamber of tooth 46?

A. The mesio-distal width of the crown
B. The inclination of the long axis of the tooth
C. The bucco-lingual thickness of the crown
D. The level of cemento-enamel junction
E. The angle between the crown and roots

33. After determining the working lengths, you plan to clean and shape the four canals of tooth 46, utilising 1% sodium hypochlorite (NaOCl) solution as an irrigant.

What step in the irrigation technique is most likely to improve the ability of the irrigant to effectively remove both the pulp tissues and biofilm from the entire root canal system?

A. Using a static irrigation technique in the apical area
B. Positioning the needle tip in the apical third of the root
C. Increasing the positive apical pressure with the syringe plunger
D. Allowing the needle to bind slightly to the apical canal walls

34. With his symptoms managed and healing progressing well, George attends his tooth 46 obturation appointment. You plan to place a resin sealant cement and gutta-percha root filling, using a lateral condensation technique.

What procedural step when obturating the root canals is most likely to reduce the risk of vertical root cracks and fracture?

A. Pre-fitting the spreader tip 0.5mm short of the working length
B. Progressing the spreader with oblique lateral movements
C. Pre-curving the spreader before inserting into the canals
D. Exerting axial compaction force away from the canal walls

35. After completing the root canal treatment, you are planning the final coronal restoration for tooth 46.

What is the most important factor that should be considered during treatment planning for this?

A. The absence of periapical radiolucencies around the roots
B. The adequacy of remaining sound tooth structure
C. The thickness of the material used for the coronal restoration
D. The type of material used for the coronal restoration

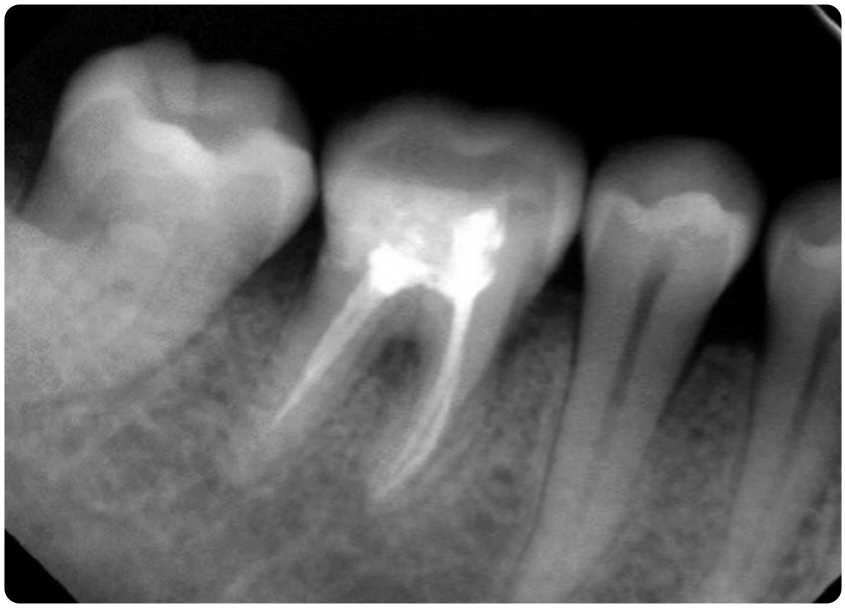
Clinical scenario 8

Question 36 through to 40 refer to the following information

Rajesh is a 39-year-old male patient who attends your clinic complaining of severe pain in the lower right molar region.

He saw a local dentist four weeks ago for root canal treatment in tooth 46 but developed a dull ache shortly afterwards. The pain has increased in intensity gradually over the past two weeks. He has brought a radiograph and some clinical notes regarding tooth 46 to the appointment. No other previous records are available.

His medical history reveals he has a gastrointestinal ulcer, which is treated with esomeprazole (Nexium), a proton pump inhibitor.



36. What clinical investigations would be most appropriate to assist you with diagnosing Rajesh's chief complaint?

A. Sensibility test, bite and release test, palpation test
B. Palpation test, percussion test, periodontal probing
C. Periodontal probing, sensibility test, bite and release test
D. Bite and release test, palpation test, percussion test
E. Percussion test, periodontal probing, sensibility test

37. The clinical records regarding the root canal treatment of tooth 46 indicated that an unbuffered solution of 2.0% sodium hypochlorite was used as an irrigant in all previous appointments.

Which irrigation factor most likely contributed to Rajesh's persisting endodontic infection?

A. The high pH of the solution reduced its antibacterial efficacy
B. The concentration of the solution was insufficient to dissolve pulpal remnants
C. The main ingredient in the solution was ineffective to kill gram-negative anaerobic rods
D. The solution accessed the canals incompletely
E. The solution extruded through the apices

38. You noted from the clinical records that the previous dentist used gutta-percha cones and a zinc oxide-eugenol sealer in a lateral compaction technique for tooth 46. Which root filling-related factor contributed most likely to endodontic treatment failure?

A. The sealant's lack of bonding to dentine
B. The incomplete root canal obturation
C. Persistent eugenol leakage from the sealant into the bone
D. Weak antibacterial activity of gutta-percha
E. The sealant's solubility rate

39. You notice a radiolucency in the furcation of Rajesh's tooth 46.

What complementary imaging modality is the most accurate for diagnosing this lesion?

A. Panoramic radiograph
B. Bitewing radiograph
C. Periapical radiograph with vertical tube shift
D. Cone-beam computed tomography (CBCT)
E. Magnetic resonance imaging (MRI)

40. You are unable to provide Rajesh with dental treatment within the next 48 hours.

What analgesic regimen is most appropriate to manage his symptoms?

A. Ibuprofen 400mg orally (6 hourly as needed) and codeine 60mg orally (6 hourly as needed)
B. Celecoxib 100mg orally (6 hourly for 3–5 days) and codeine 60mg orally (6 hourly for 3–5 days)
C. Paracetamol 1,000mg orally (6 hourly as needed), and celecoxib 100mg orally (12 hourly as needed)
D. Celecoxib 100mg orally (6 hourly as needed) and oxycodone 5mg orally (6 hourly for 3–5 days)
E. Oxycodone 5mg orally (6 hourly as needed) and paracetamol 1,000mg orally (6 hourly for 3–5 days)

Clinical scenario 9

Question 41 through to 45 refer to the following information

David is a 25-year-old labourer who works long hours outside in the tropical north of Australia on a large building site. He attends your surgery as an emergency patient, complaining of pain in the upper right region. David also tells you that he occasionally wakes up with a sour taste in his mouth.

David has poor oral hygiene, and during the course of the day, he drinks cola continuously and smokes about five cigarettes. David has not visited the dentist for many years and advises that both of his parents wear complete dentures.

On taking a history of the pain, your provisional diagnosis is reversible pulpitis in tooth 12.

41. What is the most likely description of David's pain symptoms that would lead to your provisional diagnosis of reversible pulpitis in tooth 12?

A. Spontaneous throbbing pain lasting several minutes
B. Sharp pain on biting
C. Severe pain lasting several minutes after a hot drink
D. Mild pain lasting several seconds after a cold drink
E. Pain on pressing his upper lip over the root of tooth 12

42. What investigation would be most useful in confirming your provisional diagnosis of reversible pulpitis in tooth 12?

A. Take a periapical radiograph
B. Apply a carbon dioxide snow 'dry ice' stick
C. Test with an electric pulp tester
D. Apply a heated gutta-percha stick
E. Apply hot water

43. In discussion with David, you agree to proceed with restoring his tooth 12 at today's appointment. You administer local anaesthesia, establish a cavity outline and remove caries at the dentino-enamel junction. It then becomes apparent that if you remove all the soft pulpal caries, the pulp will be exposed.

What is the best way to proceed prior to placing the final restoration?

A. Remove peripheral caries, create a rim of sound dentine around the pulpal caries, seal in the pulpal caries with the adhesive resin-based composite restoration
B. Remove all caries, carry out a coronal pulpotomy, place a quick-setting calcium hydroxide dressing and glass-ionomer cement restoration
C. Remove all caries, carry out a coronal pulpotomy, place a calcium silicate-based ('hydraulic') cement and glass-ionomer cement restoration
D. Remove all caries, extirpate the pulp, dress the root canal with calcium hydroxide, seal the access cavity with a temporary cement restoration
E. Remove carious dentine, place a zinc oxide-eugenol temporary restoration, re-enter the cavity after three months

44. David returns to your surgery for a comprehensive examination as he now has concerns about his overall oral health. You carry out a caries risk assessment to assist the development of your management plan.

Aside from poor oral hygiene, what is David's main caries risk factor?

A. Smoking
B. Low resting saliva
C. Genetic predisposition
D. Gastro-oesophageal reflux
E. High sugar intake

45. You also diagnose caries on the mesial surface of tooth 46 and after discussing your findings with David, decide to place a mesio-occlusal (MO) resin composite restoration.

What process is most likely to ensure optimal contact between teeth 45 and 46?

A. Bulk fill composite and a Siqveland matrix system
B. High viscosity ('packable') composite and a Siqveland matrix band
C. Tofflemire matrix system and burnish the band
D. Sectional matrix system and incremental placement of composite
E. Clear matrix strip and a light-reflecting wedge

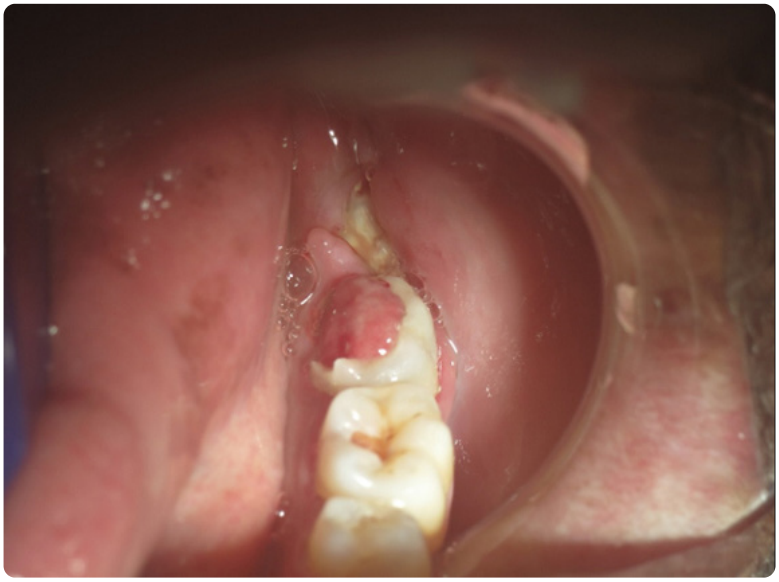
Clinical scenario 10

Question 46 through to 50 refer to the following information

Omar, a 34-year-old Aboriginal man, is from a remote Indigenous community and speaks little English. He is accompanied by his 14-year-old son who acts as an interpreter.

The son tells you that his father has been in pain for some time from a tooth on his lower left-hand side but it is now keeping him awake at night.

His son says that his father is otherwise fit and well but has never been to a dentist.



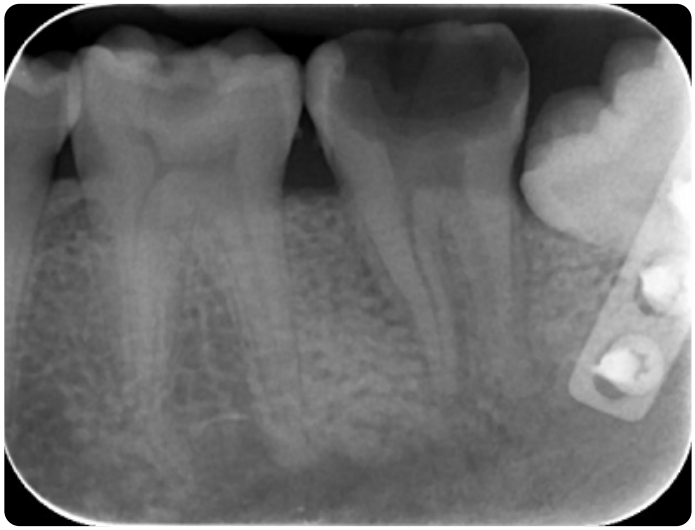
46. You explain the need for a radiograph to the patient via his son and take a periapical radiograph of Omar's lower left molars.

What is most important to consider when assessing whether it is appropriate to use Omar's son as an interpreter in this circumstance?

A. This is an emergency
B. Interpreters for remote area Indigenous languages are not available
C. An Indigenous 14-year-old is considered a mature minor
D. The telephone interpreter system will require rebooking the patient
E. Relatives may not translate information accurately

47. Having examined the patient and viewed the radiograph, you identify the pain as originating from a badly broken-down tooth 37. The periapical radiograph taken also shows a radiopaque structure overlying the roots of tooth 38.

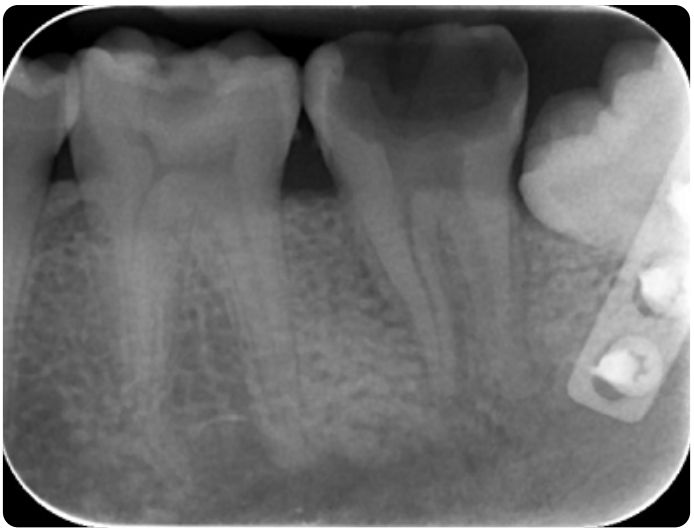
What is the most likely cause of this feature?



A. An artifact
B. A processing error
C. A titanium plate
D. An item of jewellery
E. Part of the film holder

48. You phone the Community Medical Centre to confirm the medical history. The registered nurse tells you that Omar has a history of rheumatic heart disease having suffered rheumatic fever as a child. He has no known allergies. You are considering extraction of tooth 37.

Taking into account the medical history, what is the most appropriate action to take regarding an endocarditis prophylaxis regimen?



A. 2g Amoxycillin, 60 minutes before the procedure
B. 3g Amoxycillin, 60 minutes before the procedure
C. 2g Clindamycin, 60 minutes prior to the procedure
D. 600mg Clindamycin, 8 hourly for 5 days
E. Antibiotic prophylaxis is not required

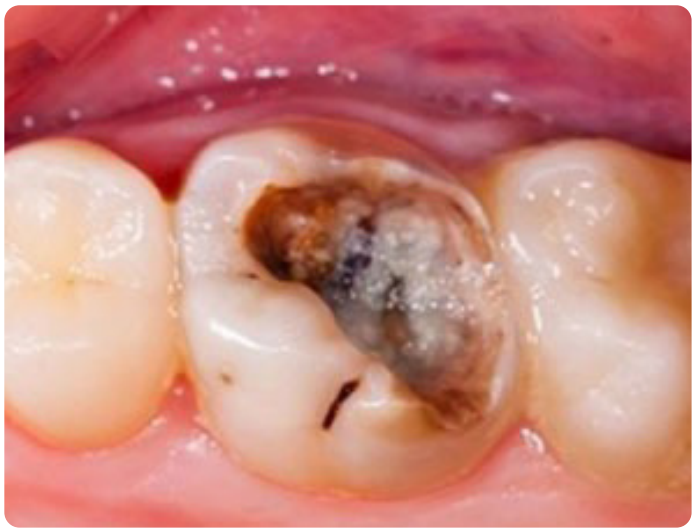
49. You are concerned about the overgrowth of soft tissue associated with the broken-down tooth 37. Your provisional diagnosis is chronic hyperplastic pulpitis.

What is the most appropriate action to take to confirm your diagnosis?

A. Place the patient's name on the 12-month oral and maxillofacial surgery public waiting list for the extraction of tooth 37 and a biopsy of the hyperplastic tissue
B. Arrange to send the patient urgently to an oral pathologist in the capital city in case the hyperplastic tissue is oral cancer
C. Remove the hyperplastic soft tissue, send it to an oral pathology laboratory and commence root canal treatment of tooth 37
D. Extract tooth 37 and send the hyperplastic soft tissue to an oral pathology laboratory for confirmation of your provisional diagnosis
E. Delay any definitive treatment until the patient has been seen by a cardiologist regarding his rheumatic heart disease

50. On the periapical radiograph you also observe a radiolucent area associated with the distal root of tooth 36.

What is the most appropriate next step?



A. Take a left side bitewing radiograph
B. Take a second periapical of tooth 36 from a different angle
C. Extract both teeth 36 and 37 to save the patient from further infections
D. Restore tooth 36 without further investigations
E. Pulp sensibility test of tooth 36

Clinical scenario 11

Question 51 through to 55 refer to the following information

Mr Manuel Zaldua is 35 years old. He presents complaining of "a lot of pain on one of my left upper teeth and the gums feel swollen around the tooth". He was unable to sleep last night because of pain.

He has a medical history of human immunodeficiency virus (HIV) infection and latent pulmonary tuberculosis. He shows you a pathology test result of a positive tuberculin skin test (Mantoux test). He is under an active course of daily rifampicin, an antimycobacterial prescribed by his medical doctor. He has been taking rifampicin daily for two months and is required to continue taking it for another two months. He does not have other symptoms and feels generally well, other than his toothache.

Manuel is a recent migrant from the Philippines to Australia.

51. You recommend to your dental assistant that you will proceed examining Manuel with standard precautions. She seems nervous about it. When you check your practice immunisation record, you note that all staff in your practice are immunised against tuberculosis.

What is the most important factor in deciding to proceed with standard precautions?

A. His HIV Infection
B. His latent pulmonary tuberculosis
C. His positive Mantoux test
D. The two months lapsed since taking rifampicin
E. Staff are vaccinated against tuberculosis

52. On examination, you note a swelling in the upper left buccal sulcus. Tooth 24 is a retained root that needs extraction.

What additional information is required to assess whether he needs standard or surgical aseptic non-touch techniques (ANTT) for the extraction procedure?

A. Find out his HIV viral load at the last blood test
B. Ask whether his doctor prescribed any antimicrobials for his tooth infection
C. Examine his submandibular lymph nodes
D. Palpate his upper left buccal sulcus
E. Take a periapical radiograph of the retained root

53. Assume that you had an infection with hepatitis C virus for which you undertook treatment two years ago. Twelve months after the treatment, your hepatitis C ribonucleic acid (RNA) test was negative.

What is your responsibility prior to extracting Manuel's tooth?

A. Complete and record a self-assessment of the risk you pose to Manuel
B. Disclose your history and status to Manuel and gain consent to proceed with the extraction
C. Have medical clearance from your doctor to undertake exposure prone procedures
D. Keep evidence of your 12-monthly screening for hepatitis C antibody
E. Call in a colleague who has not been infected with a blood borne virus to complete the extraction

54. Tooth 24 has been extracted and disposed of following the relevant Australian standard.

Considering Manuel's risk factors, into which waste category should you dispose of the bloody gauze?

A. Hazardous
B. Clinical
C. General
D. Contaminated
E. Biochemical

55. You advise Manuel that he needs to maintain excellent oral health and book another appointment for a comprehensive examination.

When completing your routine oral mucosal screening, what lesion should prompt you to alert his medical practitioner?

A. Hairy leukoplakia
B. Oral lichen planus
C. Geographic tongue
D. Fibroma
E. Melanotic macule

Clinical scenario 12

Question 56 through to 60 refer to the following information

Amanda Rogers, 76 years old, presents to your surgery. She has had pain from the lower right quadrant which has kept her up at night.

56. Amanda has ticked "YES" to "Do you normally require antibiotic cover before dental treatment?" on her medical form.

What conditions would necessitate the use of antibiotic prophylaxis for Amanda?

A. Mitral valve prolapse
B. Pacemaker
C. Ventricular septal defect
D. Patent ductus arteriosus
E. Artificial hip replacement

57. Amanda's medical form indicates she also has the following medical conditions:

- High blood pressure (155/95mmHg)
- Stroke (9 years ago)
- Smoker (Currently 1 pack / day; 60 pack-year history)
- Emphysema

What is the correct American Society of Anesthesiologists (ASA) classification of Amanda's physical status?

A. ASA I: A normal and healthy patient
B. ASA II: A patient with a mild systemic disease
C. ASA III: A patient with a severe systemic disease that is not life-threatening
D. ASA IV: A patient with a severe systemic disease that is a constant threat to life

58. Amanda indicates she is taking warfarin to prevent a second stroke.

What test is most appropriate in measuring the effect of warfarin?

A. Activated Partial Thromboplastin Time
B. Prothrombin Ratio
C. International Normalised Ratio
D. Thrombin Time
E. Bleeding Time

59. You take a panoramic radiograph which reveals tooth 48 to be carious. You assess the tooth on the image.

Which radiological sign indicates the highest risk of nerve injury during third molar surgery?

A. Interruption of the lamina dura of the inferior dental canal overlaying the tooth
B. Narrowing of the inferior dental canal
C. Superimposition of the inferior dental canal over the root of tooth 48
D. Presence of an enlarged pericoronal space
E. Periradicular bone sclerosis

60. Your treatment plan involves the removal of tooth 48 but based on the film you are concerned about the risk of nerve injury.

Which additional imaging modality is most appropriate in planning for the removal of the 3rd molar?

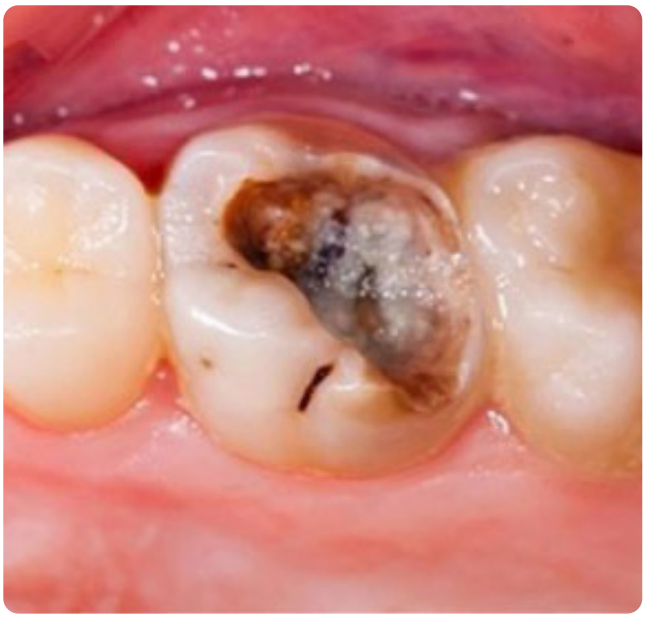
A. Magnetic resonance imaging (MRI)
B. Lateral cephalometric radiograph
C. Periapical radiograph
D. Computed tomography (CT)
E. Cone-beam computed tomography (CBCT)

Clinical scenario 13

Question 61 through to 65 refer to the following information

Ms Suarez is a new patient attending your practice for an emergency visit for pain from tooth 26, photographed below.

Ms Suarez is interested in holistic dental practice and tells you that she is not a believer in mainstream dentistry.



61. You take a history of the issues related to tooth 26.

What is the most important type of information you would gather from Ms Suarez to assist in developing a diagnosis of her presenting complaint?

A. Pain history
B. Medical history
C. Oral hygiene habits
D. Frequency of dental visits
E. Family history

62. Based on the clinical photograph, what behaviour or habit would be most relevant?

A. Medications being taken
B. Water intake
C. Dietary composition
D. Fluoride intake
E. Frequency of dental attendance

63. Following completion of a comprehensive patient history, what is the most valuable clinical investigation to assist you in reaching a diagnosis?

A. Percussion test
B. Pulp sensibility test
C. Local anaesthetic test
D. Periodontal probing
E. Cavity probing

64. While conducting your clinical examination, you noticed several 'white spot' lesions in Ms Suarez's teeth. You suggest topical fluorides as a preventative measure to control these lesions. Ms Suarez believes that topical fluorides are toxic.

What is the most appropriate way to respond to Ms Suarez?

A. Respect Ms Suarez's beliefs and document everything in the dental records
B. Discuss evidence-based information related to topical fluoride safety
C. Provide Ms Suarez with natural alternatives such as coconut oil
D. Refuse to continue the treatment plan without topical fluoride supplements
E. Suggest that Ms Suarez sees a holistic dentist

65. After conducting your clinical examination, you advise Ms Suarez that a radiograph involving minimal radiation exposure is needed to confirm your diagnosis as a root canal treatment might be needed.

Ms Suarez refuses to consent for a radiograph due to her concerns about the negative effects of radiation.

What is the most appropriate way to manage this situation?

A. Explain you cannot proceed without a radiograph
B. Continue with the treatment without a radiograph
C. Suggest extraction instead of root canal treatment
D. Perform the root canal treatment using an apex locator

Clinical scenario 14

Question 66 through to 70 refer to the following information

Mr Shah is a 38-year-old patient who has presented to your practice with a chief complaint of clicking joints when he opens and closes his jaw.

Mr Shah has cerebral palsy and is currently taking several medications to manage his condition.

Mr Shah informs you that he wishes to discuss various dental-related issues including clicking joints.

66. What is the most conclusive diagnostic investigation that you should use to reach a diagnosis in regard to Mr Shah's clicking joints?

A. Panoramic radiograph
B. Ultrasound
C. Cone-beam computed tomography (CBCT)
D. Magnetic resonance imaging (MRI)

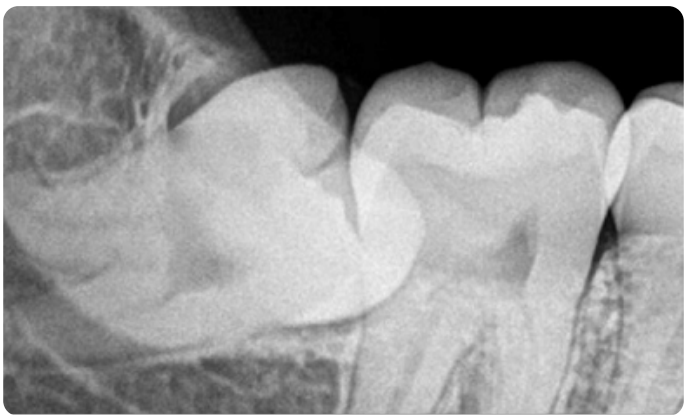
67. Your diagnostic tests show that Mr Shah has bilateral anteriorly displaced discs.

What is the appropriate management for Mr Shah?

A. Explain that no further treatment is indicated
B. Provision of mandibular advancement splint
C. Injection of botulinum toxin to the masseter and anterior temporalis
D. Manual manipulation to recapture the discs
E. Prescription of diazepam for muscle relaxation

68. Mr Shah has an impacted wisdom tooth 48 as shown in the periapical radiograph, which you decide will need surgical extraction.

What imaging modality would provide the most value when planning for the extraction of Mr Shah's tooth 48?



A. Panoramic radiograph
B. Ultrasound
C. Cone-beam computed tomography (CBCT)
D. Magnetic resonance imaging (MRI)

69. During your examination, you notice that Mr Shah's gingivae are swollen. You learn that Mr Shah is taking several medications for his depression and anxiety.

Which medication most likely relates to Mr Shah's gingival hyperplasia?

A. Selective serotonin reuptake inhibitor (SSRI)
B. Tricyclic antidepressant (TCA)
C. Monoamine oxidase inhibitor (MAOI)
D. Phenobarbitone
E. Diazepam

70. Mr Shah is missing tooth 14 and wishes to replace it with an implant retained crown, however there is evidence of active periodontal disease in his oral cavity. Mr Shah insists on prioritising the implant over periodontal treatment.

What is the most appropriate way to manage this situation?

A. Continue with placing the implant as a priority and respect Mr Shah's desires
B. Continue with placing the implant but plan for periodontal treatment at a later stage
C. Continue with placing the implant after documenting your discussions with Mr Shah in the dental records and ask Mr Shah to sign a legal waiver
D. Refer Mr Shah to an oral surgeon to place the implant
E. Explain that you cannot proceed with implant treatment until the periodontal condition is stable

Clinical scenario 15

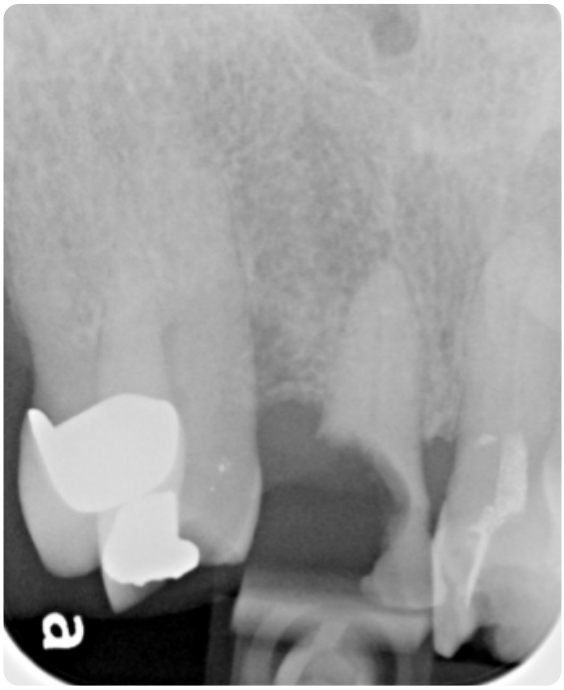
Question 71 through to 75 refer to the following information

Ms Rutherford is 53 years old and is attending your practice today with her carer for a comprehensive examination. Ms Rutherford is schizophrenic, suffers from epilepsy (with less than one seizure a year) and psychosis, as well as having a mild intellectual disability.

Ms Rutherford is unable to provide you with a detailed medical history and her carer has brought a list of her medications.

71. Ms Rutherford has broken tooth 11. You took a periapical radiograph of the tooth.

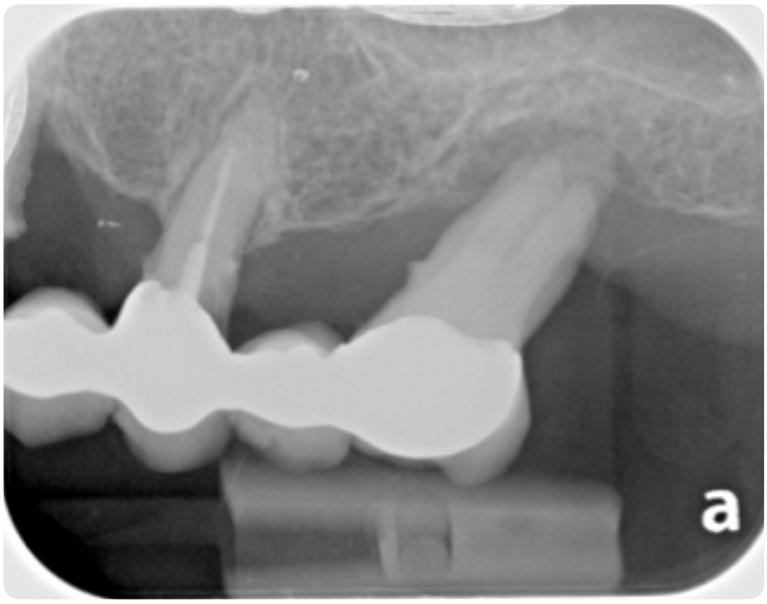
What is the most important feature of tooth 11 that you should consider?



A. Pulp status
B. Periodontal condition
C. Tooth mobility
D. Tooth restorability
E. Patient's preference

72. Ms Rutherford informs you that the upper left posterior teeth are bothering her. From the radiograph, you suspect that there is an issue related to the bridge in the region surrounding teeth 24–27.

What is the most important diagnostic test that you should perform to assess the issue in quadrant 2?



A. Mobility test
B. Periodontal probing
C. Percussion test
D. Pulp sensibility test
E. Checking crown margins

73. Ms Rutherford says she has a phobia of needles and the carer has asked if treatment could be done under inhalation sedation.

What would be the most appropriate advice you should provide regarding nitrous oxide sedation for Ms Rutherford?

A. It is indicated as it will replace local anaesthetic injections
B. It is contraindicated because local anaesthetic injections are still required
C. It should be approached with caution due to patient's psychiatric condition
D. It is not beneficial and treatment should be conducted under general anaesthesia

74. You determine that teeth 11, 25 and 27 (the latter two being the bridge abutments) require extraction, but the remaining maxillary teeth are sound.

Considering the patient's current health status, what would be the most appropriate option to replace the extracted teeth?

A. Implants
B. Resin-bonded bridges
C. A cobalt-chrome partial denture
D. An acrylic partial denture

75. After completing treatment planning, you assess that Ms Rutherford does not have the capacity to provide informed consent.

From whom should this be obtained?

A. The patient's carer
B. The patient's medical doctor
C. The patient's legal guardian
D. The patient's health insurance fund
E. The patient's next of kin

Clinical scenario 16

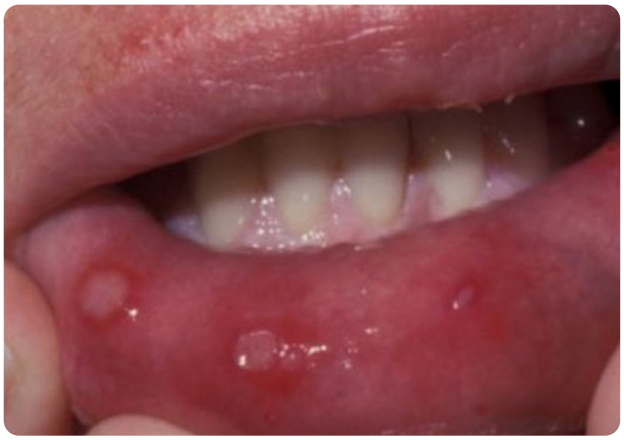
Question 76 through to 80 refer to the following information

Jenine Brown is a 35-year-old woman who was recently diagnosed with multiple sclerosis. She tells you that she is stressed and shocked by her diagnosis and has not yet come to terms with her condition.

She recently had an initial infusion of the disease-delaying drug, ocrelizumab (Ocrevus). Now, she has had a recurrent "flare-up" of mouth ulcers.

Jenine cannot get an appointment with her general medical practitioner for a week, and she asks you to help her alleviate her discomfort.

You take a clinical photograph of the lesions on her lower lip:



76. You consult a pharmacological manual and read that the drug ocrelizumab is a humanised monoclonal antibody that works by targeting and removing specific B cells, resulting in the reduction of T cell activation.

To which category of drugs does ocrelizumab belong?

A. Antiviral
B. Immunosuppressant
C. CNS depressant
D. Antimetabolite
E. Genetic modifier

77. Given Jenine's description of the history of her ulcers, what pathologic process is causing her oral discomfort?

A. Atrophic
B. Dystrophic
C. Metabolic
D. Inflammatory
E. Infective

78. You decide to refer Jenine back to her general medical practitioner to assess for possible deficiencies associated with minor aphthous ulceration.

Apart from an iron, folate and zinc deficiency, what is another common deficiency associated with minor aphthous ulceration?

A. Selenium
B. Phosphorus
C. Magnesium
D. Vitamin B12
E. Calcium

79. You decide that, until you have more knowledge concerning the dental implications of Jenine's treatment for multiple sclerosis, you will avoid prescribing topical steroids.

What will you prescribe for topical pain relief?

A. Chlorhexidine gel
B. Benzydamine gel
C. Warm salty rinse
D. Methyl salicylate rinse
E. Sodium bicarbonate rinse

80. You review Jenine ten days later and find that the ulcers have healed.

If an ulcer had not healed within this timeframe, which of the following signs would necessitate prompt referral to an oral medicine specialist?

A. Presence of vesicles
B. Indurated margins
C. Pseudomembranous plaque
D. Lace-like striations
E. Suppuration

Clinical scenario 17

Question 81 through to 85 refer to the following information

Ms Bashir is a 36-year-old patient who has come to your practice for the first time for a check-up and advice regarding occasional sensitivity.

Ms Bashir mentioned that she noticed areas of staining between her two upper front teeth.

81. What is the most important information you should gather from Ms Bashir, as part of the risk assessment?

A. Dietary habits
B. Frequency of dental visits
C. Smoking and alcohol consumption
D. Water fluoridation in the area
E. Family history of dental caries

82. Ms Bashir reports to you that she has been suffering lately from dry mouth.

What is the most important question that you would be asking Ms Bashir to investigate her complaint?

A. Are you currently taking any medications?
B. Do you regularly consume spicy food?
C. Do you have any known allergies?
D. Do you have a family history of dry mouth?
E. Do you regularly use chewing gum?

83. Ms Bashir is fully dentate and all her third molars are present and fully erupted.

Given the findings from the initial clinical assessment, which diagnostic test is the most useful in assessing Ms Bashir's caries status?

A. Bitewing radiographs
B. Probing pits and fissures
C. Transillumination
D. Plaque disclosure
E. Panoramic radiograph

84. Clinically, you notice that the staining between Ms Bashir's teeth 11 and 21 is due to demineralisation confined to enamel.

What is the most appropriate treatment?

A. Restore using glass-ionomer cement
B. Restore using resin composite
C. Restore using resin composite and a glass-ionomer lining
D. Apply topical fluoride varnish and monitor
E. Do nothing and monitor

85. What specific oral hygiene aid would be most effective in preventing further demineralisation?

A. Interdental floss
B. Interdental brushes
C. Fluoride toothpaste
D. Electric toothbrush
E. Chlorhexidine mouthwash

Clinical scenario 18

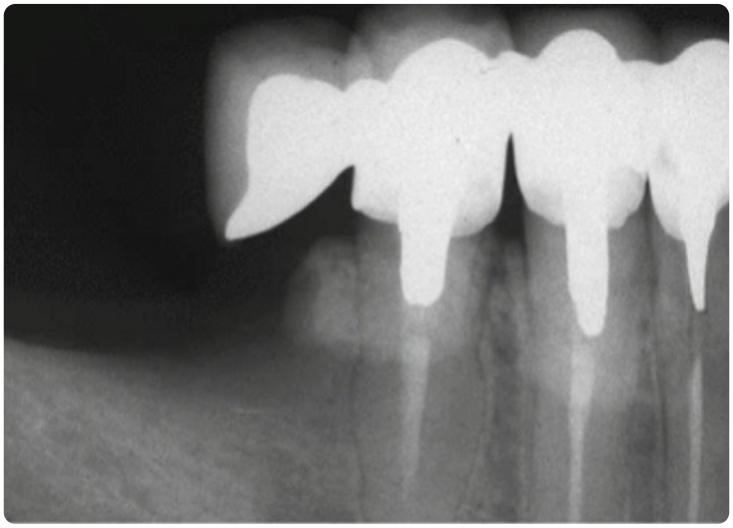
Question 86 through to 90 refer to the following information

Marriam is a 57-year-old lady who came to your clinic complaining that she has difficulty eating after losing her back teeth. She had extensive crown and bridge work overseas because she was unable to tolerate removable partial dentures. She would like to have the molar on the right-hand side replaced with an implant and would like your advice as to how this option would work.

Her medical history includes hypertension, which is treated with enalapril, an angiotensin-converting enzyme (ACE) inhibitor medication, and obesity.

She provides you with a 10-month-old radiograph taken overseas.

You review the radiograph and commence investigating her periodontal and surgical risks for implant placement in the area where tooth 46 was extracted.



86. You notice some radio-opacities near the coronal third of the roots of teeth 43 and 44. You diagnose these as exostoses.

What is a likely cause?

A. Inadequate cleaning under the bridge
B. She is a heavy bruxer
C. Infrequent professional scaling and cleaning
D. Deep isolated pockets around teeth 43 and 44
E. History of bone-related disease

87. You complete a basic periodontal examination (BPE/CPITN) using a World Health Organisation ball-ended periodontal probe. During probing all sextants, you found that the black band of the probe was completely visible.

There was bleeding on probing in the interproximal area between teeth 43 and 44 and you identify an overhang on the buccal aspect of the crown on tooth 44.

What is the most appropriate BPE score you should ask your dental assistant to record in Marriam's file for sextant 6?

A. 0
B. 1
C. 2
D. 3
E. 4

88. You further look at the risk factors for periodontitis.

What in Marriam's history is a systemic risk factor for gingivitis to progress to periodontitis?

A. Gender
B. Age
C. Obesity
D. Hypertension
E. History of tooth loss

89. You are exploring the surgical risks for implant placement in the area where tooth 46 was extracted and in particular, the risk of implant osteotomy perforating into the submandibular fossa.

What investigation will provide you with the most accurate assessment of the lingual mandibular anatomy in the target area for implant placement?

A. Intra-oral palpation by compressing the tissues against the mandible
B. Periapical radiograph taken with the paralleling technique
C. Diagnostic casts
D. Panoramic radiograph
E. Cone-beam computed tomography (CBCT)

90. Further looking at the surgical risk, what anatomical structure should you identify when planning implant placement in the area where tooth 46 was extracted?

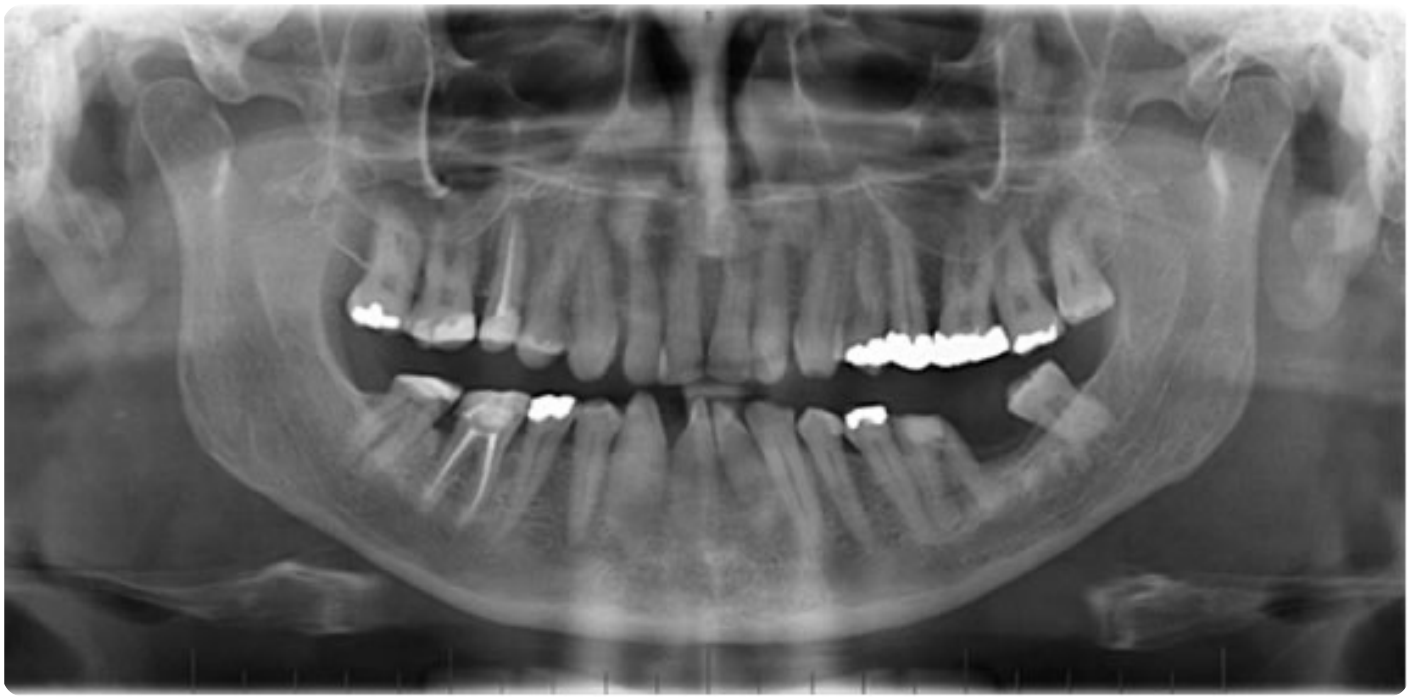
A. The mylohyoid nerve
B. The mental nerve
C. The inferior alveolar nerve
D. The long buccal nerve

Clinical scenario 19

Question 91 through to 95 refer to the following information

Mr Edgard, a 74-year-old male patient, has been referred by the local hospital for a dental check-up before his first infusion of zoledronic acid (a bisphosphonate) at the hospital in 10 days. Mr Edgard shows you an information sheet he received from his doctor on intravenous (IV) bisphosphonates.

A panoramic radiograph was taken for initial assessment.



91. What is the priority goal in Mr Edgard's treatment plan?

A. Establish excellent oral hygiene habits
B. Prevent the development of new carious lesions
C. Restore missing teeth and stabilise the occlusion
D. Place crowns on root canal treated teeth
E. Extract any non-restorable teeth

92. In consultation with his medical practitioner, Mr Edgard's management plan needs to be altered.

What is the most appropriate change?

A. To delay the zoledronic acid until the dental treatment is complete
B. To prescribe oral rather than intravenous bisphosphonates
C. To prescribe prophylactic antibiotics before any dental treatment
D. To provide restorations only and start intravenous bisphosphonates

93. After the clinical examination, it was noted that tooth 36 had an unsatisfactory root filling and an apical infection, and was deemed unrestorable and charted for extraction.

What is the most significant local factor that could complicate the extraction of tooth 36?

A. Brittleness due to the root canal treatment
B. Hypercementosis around the bulbous mesial root
C. The proximity of the mesial root in relation to tooth 35
D. The expected delay in healing due to the apical infection
E. The variable density of the mandibular bone

94. When obtaining informed consent for extraction of tooth 36, what is the most important action to be considered?

A. Signing a written informed consent form by the patient
B. Providing a pamphlet that explains the procedure in simple language
C. Explaining the benefits and positive outcomes of the treatment
D. Checking that the patient understands the information provided
E. Ensuring that a witness is present while obtaining informed consent

95. You are concerned about the risk of medication-related osteonecrosis of the jaw (MRONJ).

What is the safest time for performing the extraction to reduce this risk?

A. Any time; the risk is the same, regardless of the timeframe
B. As soon as possible, before the administration of the IV injection next Friday
C. Midway between two subsequent IV injections
D. Two weeks after temporarily ceasing the IV injections

Clinical scenario 20

Question 96 through to 100 refer to the following information

Adrian Cruz is a 35-year-old male who attends your practice today. Adrian is seeking dental care for a severe toothache in the upper left jaw that has been present for two days.

Adrian was exposed to hepatitis B virus ten months ago, which subsequently led to acute hepatitis B infection. He was never vaccinated against hepatitis B due to his parents' strong anti-vaccination beliefs.

Upon clinical examination, you diagnose tooth 26 with irreversible pulpitis. The tooth is not restorable due to the extensive caries. You also notice other teeth with carious lesions that need urgent dental care.

Your treatment plan today is to extract his tooth 26.

96. You discuss with Adrian his general health and he shows you his blood test results from one month ago.

What positive laboratory test result indicates that he is presently infectious with hepatitis B virus?

A. Hepatitis B surface antigen (HBsAg)
B. Hepatitis B surface antibody (HBsAb)
C. Hepatitis B core antibody (HBcAb)
D. IgM antibody to HBc antigen (IgM anti-HBc)

97. Your dental assistant expresses concern about the higher infectivity of hepatitis B compared to human immunodeficiency virus (HIV) and asks for your advice on the necessary infection control precautions the team should take when extracting Adrian's tooth 26.

What is a key precaution that should be taken to minimise the risk of hepatitis B virus transmission from Adrian to the team and other patients?

A. Apply two cycles of surface cleaning after the procedure
B. Use a pre-procedural disinfectant mouth rinse
C. Wear single-use gloves during the procedure
D. Reschedule him as the last patient of the day
E. Use P2 (N95) surgical masks

98. After extracting Adrian's tooth 26, you notice that one of your fingers was injured and bleeding when you removed the used forceps from the bracket table. You arrange for an immediate blood test, which shows that your level of protective antibodies against hepatitis B is 98mIU/mL.

What is the appropriate post-exposure protocol you should follow in this situation?

A. Have a single dose of Hepatitis B Immunoglobulin within 48–72 hours
B. Start a course of Hepatitis B Vaccination (HBV) within seven days
C. Have an assessment by an infectious disease physician
D. Prescribe an antiviral medication to protect against hepatitis B
E. No follow up is required, as your protective antibody levels are sufficient.

99. You acknowledge the emotional discomfort you feel about the potential exposure to infectious diseases while treating Adrian, but you also recognise his oral health needs and your professional obligations.

Upon reflecting on these issues, what precaution is the most appropriate for you to take?

A. Create an alert in his file for you and your dental assistant to double glove
B. Refer him to another practice for further care
C. Ask him to make another appointment when he is no longer infectious
D. Provide only palliative care involving non-exposure prone procedures
E. Undertake refresher training on managing sharps

100. As a result of this incident, you have reviewed the immunisation status of your practice staff for vaccine-preventable diseases.

In addition to hepatitis B, with what other standard vaccination should dental staff ensurethey are up-to-date?

A. Viral influenza
B. Hepatitis A
C. Tuberculosis
D. Tetanus

Clinical scenario 21

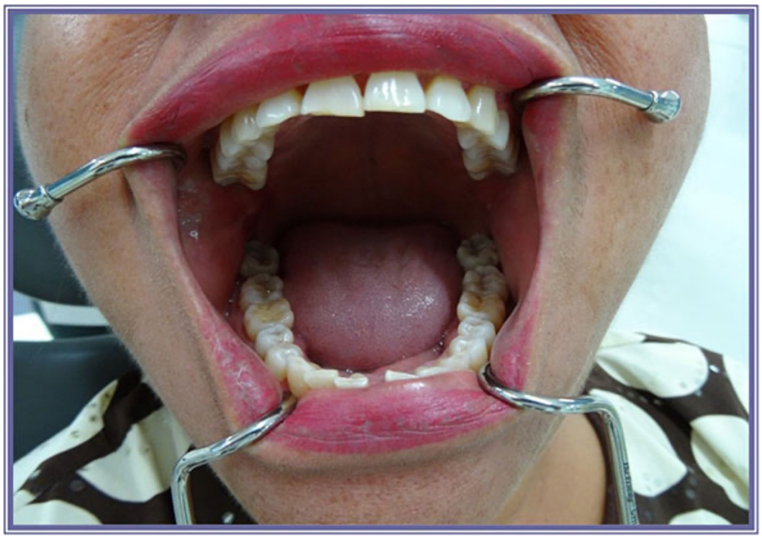
Question 101 through to 105 refer to the following information

Florence, a 64-year-old female from the Samoan Islands, presents to your clinic for a general check-up. Her reason for the appointment being, "I think I may need fillings because I have some sore back teeth." She has been living in Australia for the past 15 years.

Florence's medical history reveals that she was diagnosed with type 2 diabetes mellitus ten years ago. She states that she is on a controlled diet with regular exercise and feels as though she is in control. She does not attend a medical practitioner regularly and does not do any blood glucose monitoring. She smokes 10 cigarettes per day.

Her dental history indicates she is an irregular attender with her last attendance being eight years ago for upper wisdom teeth extractions.

She is regarded as an elder of the local Samoan community and as such is required to attend many cultural events. Organising, planning and appearing at such events adds stress to her family responsibilities. She reports she has been suffering from temporal headaches.



101. You are concerned that Florence's diabetes may not be as well controlled as she believes it is and would like to refer her to her medical practitioner for further testing.

What blood test provides the best indication of her diabetic control?

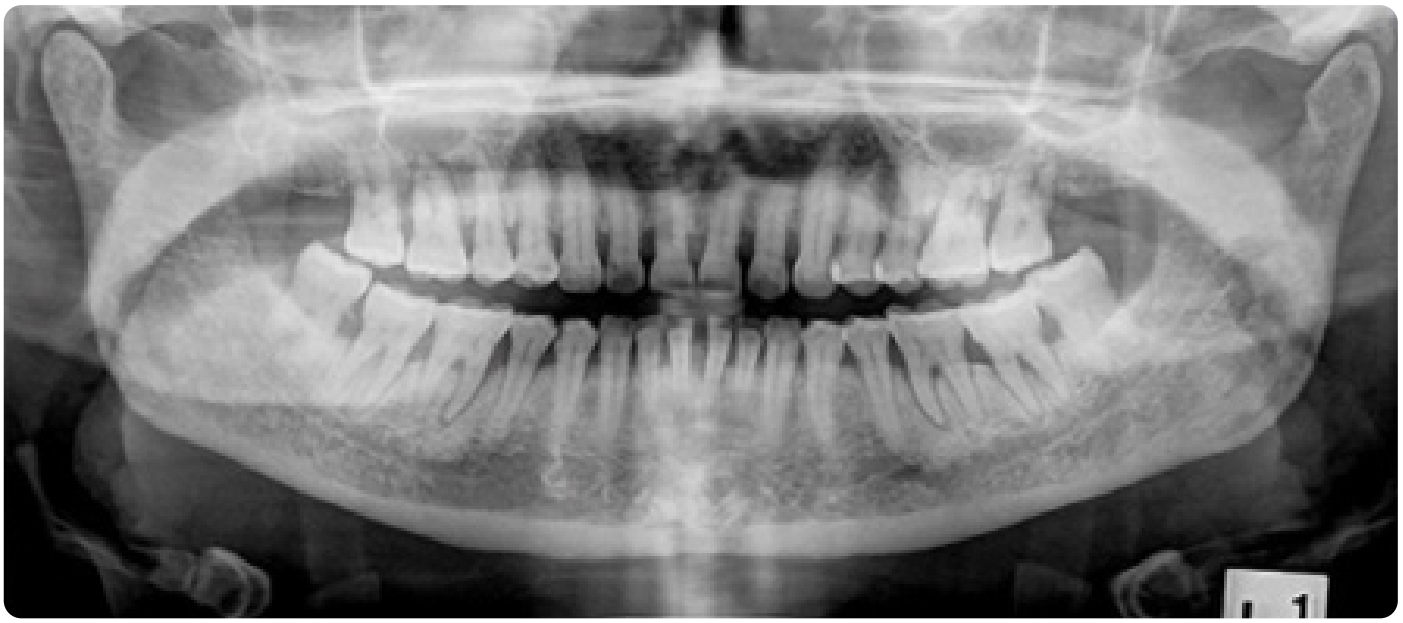
A. Glucose screening
B. Glucose tolerance
C. Random blood sugar
D. Fasting blood glucose
E. Haemoglobin A1C

102. An oral soft tissue examination reveals widespread gingival bleeding on probing and periodontal pockets exceeding 6mm in depth around her molars, although accurate pocket measurement was prevented by subgingival calculus and discomfort.

You take a panoramic radiograph as seen below.

From the radiograph you conclude that in the worst sites Florence has interproximal bone loss reaching the apical third of the tooth root.

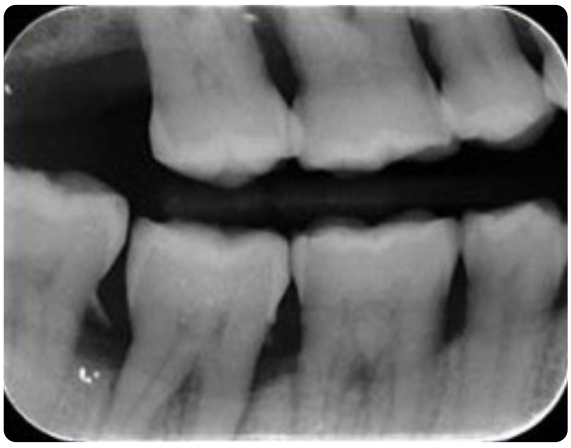
Using the clinical and radiographic information provided, how should you classify her generalised periodontitis?

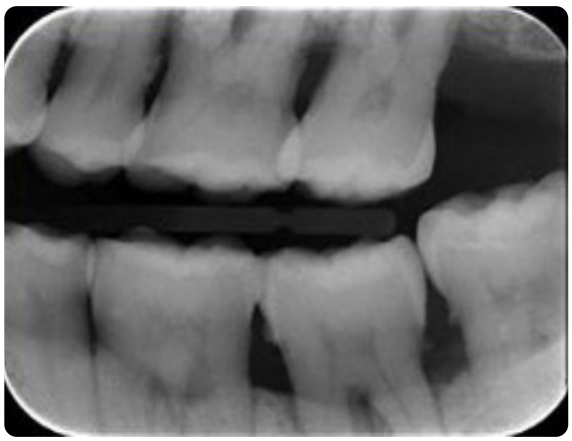


A. Stage II Grade B
B. Stage III Grade B
C. Stage III Grade C
D. Stage IV Grade B
E. Stage IV Grade C

103. The clinical findings and the radiographs pictured below indicate generalised occlusal tooth wear.

What radiographic feature supports a diagnosis of bruxism?





A. The absence of radiographic signs of caries
B. The presence of significant bone loss around the molars
C. Normal enamel thickness on the occlusal surfaces of teeth 38 and 48
D. The radiographic evidence of pulp stones

104. Florence accepts that she may be grinding her teeth at night.

What is the best initial management for sleep bruxism that you should recommend?

A. A maxillary occlusal splint
B. Psychological counselling
C. Botulinum toxin type A injection
D. Pharmacological therapy
E. A mandibular repositioning device

105. You are concerned that Florence has poorly controlled diabetes and you decide to use adjunctive antibiotics in addition to other standard periodontal treatment.

Which of the following antibiotics, when taken in combination with metronidazole, has been shown to be effective in reducing probing pocket depth when used concurrently with scaling and root planing (SRP)?

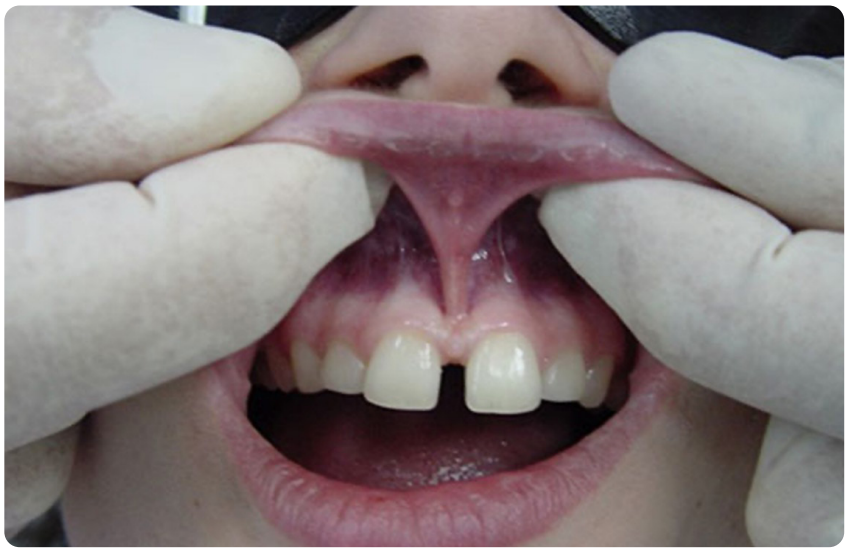
A. Clindamycin
B. Amoxycillin
C. Azithromycin
D. Doxycycline

Clinical scenario 22

Question 106 through to 110 refer to the following information

Andrew's parents are requesting a second opinion specifically regarding treatment of the space between Andrew's front teeth. Their regular dentist told them that the space between Andrew's front teeth cannot be closed without a fraenectomy.

Andrew is 10 years old and his upper permanent canines and second permanent premolars are yet to erupt.



106. Andrew's anterior upper labial fraenum blanches the interproximal papilla when stretched.

What additional investigation should you complete to identify the cause of Andrew's problem?

A. A periapical radiograph of the upper central incisors
B. An occlusal radiograph
C. Magnetic resonance imaging (MRI) of the soft tissues of the anterior maxilla
D. Periodontal probing of teeth 11 and 21
E. A lateral head cephalometric radiograph

107. Andrew's parents are anxious to avoid unnecessary surgery and ask if there are effective alternatives to fraenectomy.

Based on the clinical picture, what evidence-based advice should you provide?

A. Normal growth will not close the space between Andrew's front teeth
B. Normal growth is likely to close the space between Andrew's front teeth
C. Fraenectomy is unavoidable if the space between Andrew's front teeth is to be closed
D. Fraenectomy is avoidable if the space between Andrew's front teeth is closed orthodontically
E. Wait until Andrew's canine teeth erupt and reassess the need for fraenectomy

108. To support informed consent from Andrew's parents, you include in the discussions a possible treatment option of combining fraenectomy and orthodontic treatment.

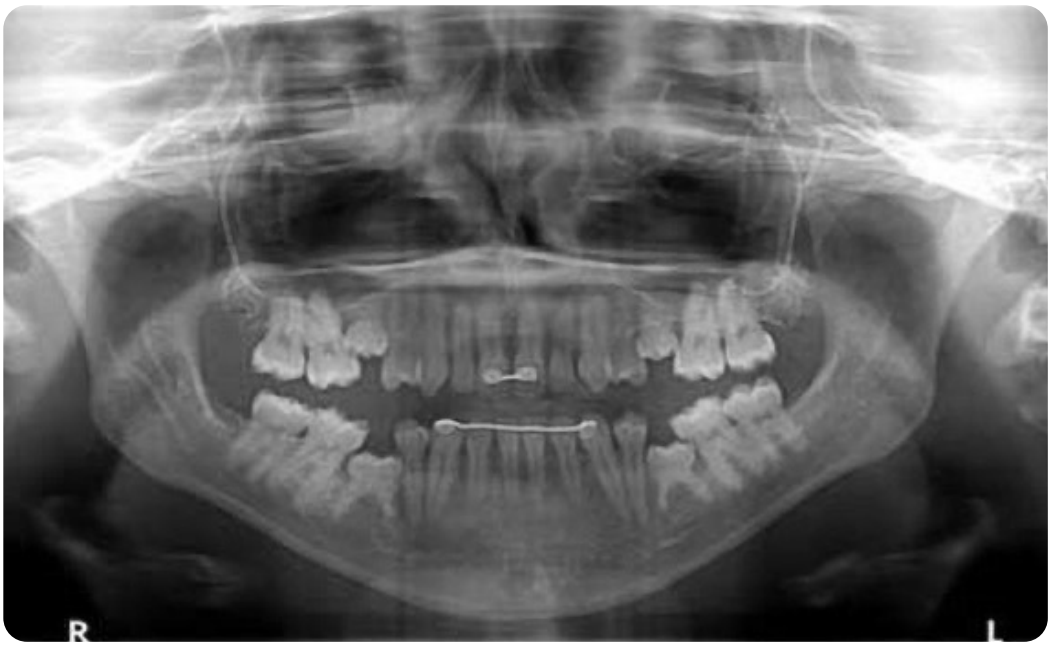
For this treatment option, why should you recommend early fraenectomy in combination with orthodontic treatment?

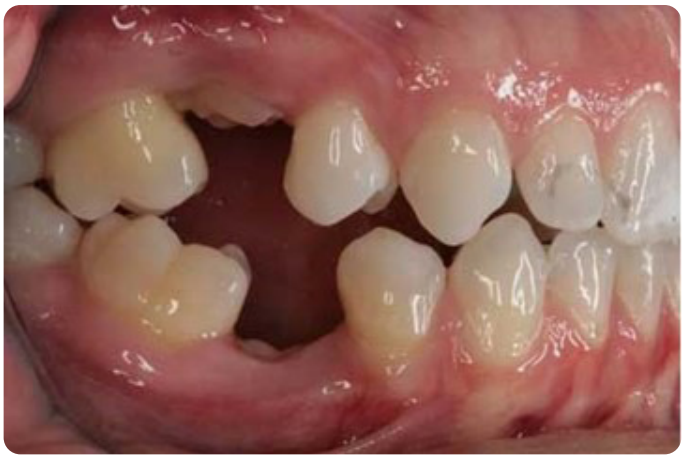
A. Fraenal attachments are an impediment to orthodontic closure of diastemas
B. A fraenectomy will avoid the requirement for a retainer
C. Fraenectomy facilitates interproximal tooth cleaning during orthodontic treatment
D. Orthodontic tooth movement is less likely to be impeded by scar tissue
E. A fraenectomy will address soft tissue aesthetics

109. Andrew had his diastema managed by an overseas orthodontic practice. He returns to see you as an adult concerned that he has gaps further back in his mouth. He has not seen a dentist for five years.

You take the clinical photograph and radiograph shown below.

Which of the following best describes Andrew's condition?





A. Ectopic second premolars
B. A failure of eruption of second premolars
C. A failure of eruption of first permanent molars
D. Ankylosis of deciduous second molars
E. Dilacerated roots of deciduous second molars

110. Andrew is upset that the reason for the posterior gaps was not diagnosed or managed by the overseas orthodontist. His parents would like to know to whom they should complain.

What professional advice should you give the parents?

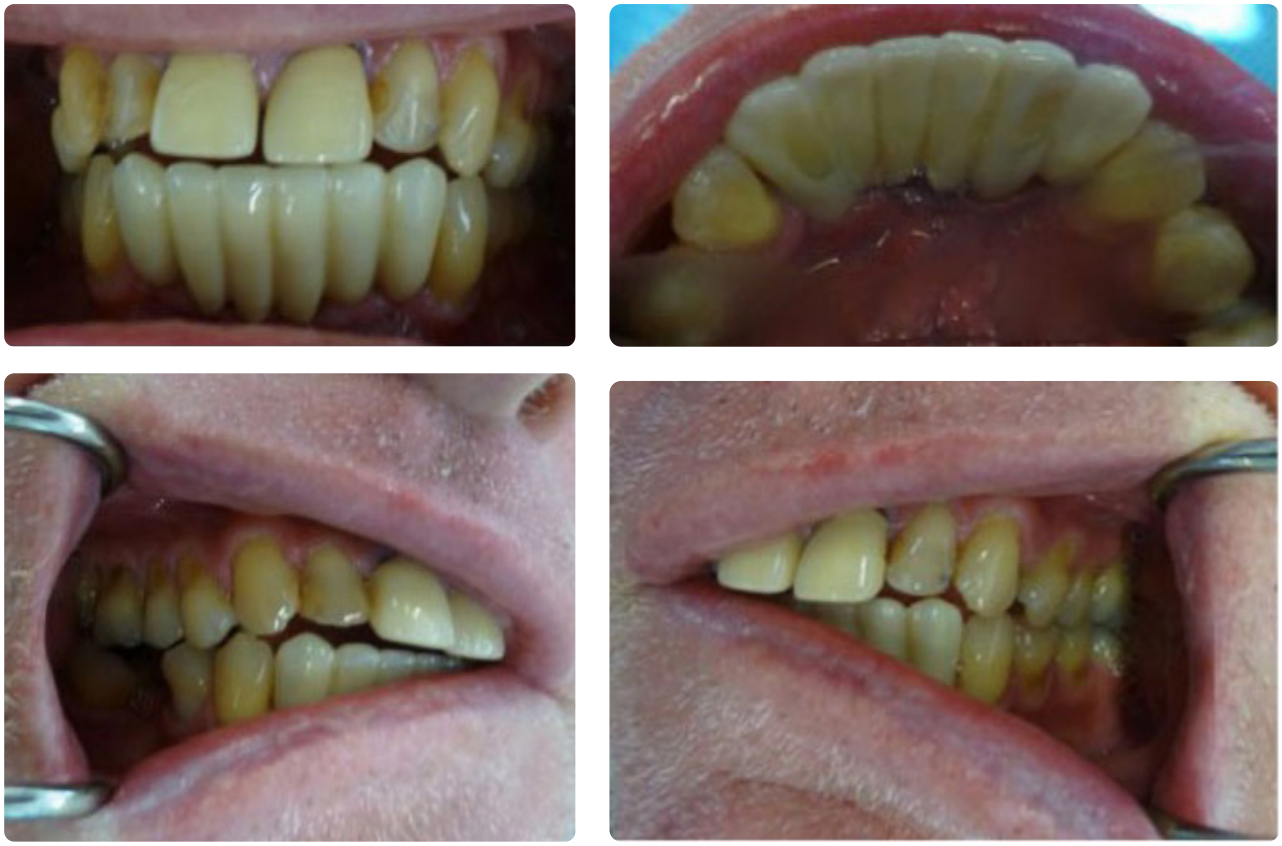
A. Forget all about it as it involves an overseas clinician
B. Write to the treating clinician detailing his complaint
C. Write to the registering body in the country where he was treated detailing his complaint
D. Write a letter to the editor of the national newspaper in the country where he was treated detailing his complaint
E. Promulgate evidence of his poor treatment to potential patients via social media

Clinical scenario 23

Question 111 through to 115 refer to the following information

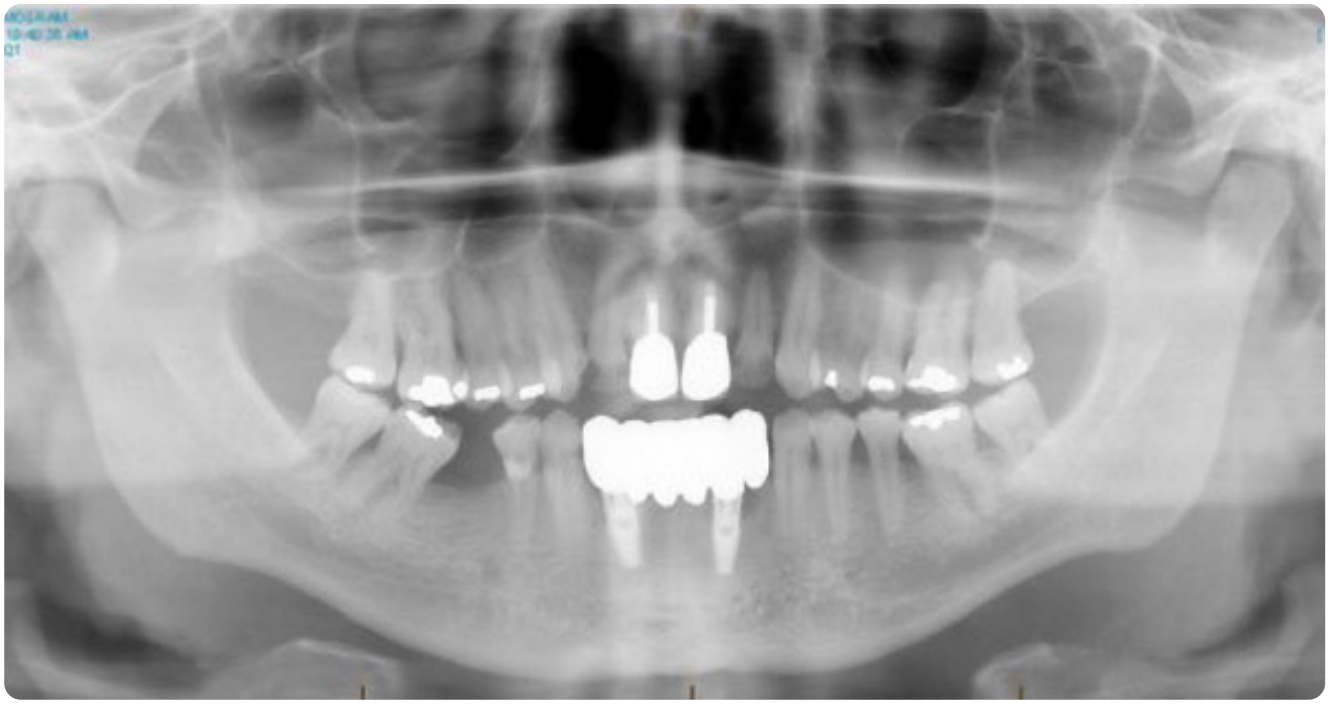
Mr Christakos, a healthy 58-year-old male, attends your clinic complaining of a loose bridge which replaces some lower front teeth. He says it has become loose over the last three weeks. He reports that the bridge is supported by implants that were placed three years ago. The implants were placed immediately into the extraction sites and the bridge constructed nine months later.

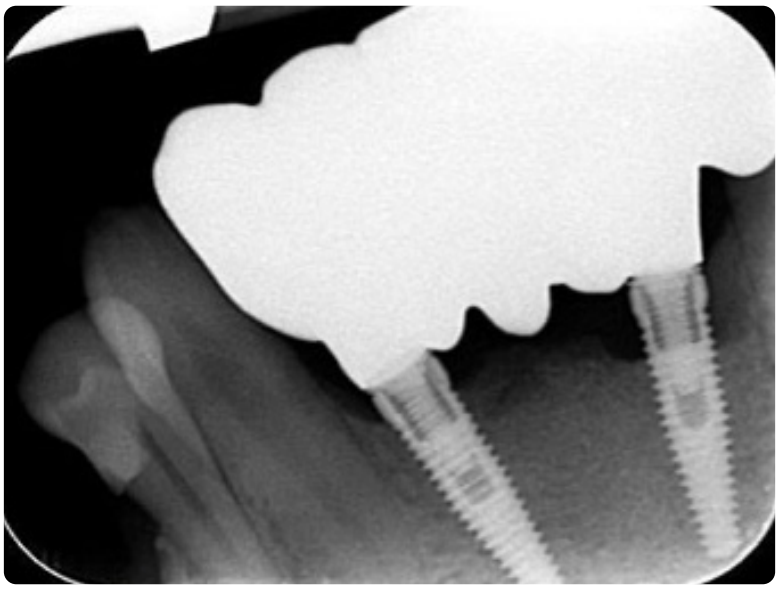
You take photographs of the implant supported bridge and Mr Christakos's occlusion.



111. The implant bridge is a direct to fixture screw retained, six-unit bridge with one unit cantilevered distal to the 32 area. You take a panoramic and a periapical radiograph (shown below) to further investigate the area of concern.

Following your investigation, what is the most likely cause of the bridge becoming loose?





A. Occlusal overload
B. Peri-implant mucositis
C. Peri-implantitis
D. Lack of osteointegration
E. Loose abutment screws

112. During your soft tissue examination, you note that the gingiva adjacent to the implants is red and swollen. In response to your questions regarding his oral hygiene practices, Mr Christakos reports using a manual toothbrush on all teeth and floss to clean between his natural teeth. He does not carry out any specific cleaning around the implant-supported bridge.

You advise Mr Christakos to adopt specific cleaning techniques around the implants.

Which factor facilitates accessibility for cleaning the 32 area?

A. The cantilevered pontic
B. The anterior open bite
C. An open contact
D. The mobility of the abutment

113. You plan to advise Mr Christakos on oral hygiene techniques for cleaning around his implants.

Based on the limited evidence available, which cleaning method is considered best practice?

A. A toothbrush angled towards the implant alone
B. A circumferential flossing method
C. A regular antibacterial mouthwash
D. Interproximal brushes
E. Water jet flosser

114. You decide to refer Mr Christakos to a specialist periodontist for surgical access and mechanical debridement of the 32 implant surface.

Which of the following mechanical debridement techniques is most effective?

A. Debridement with plastic curettes
B. Ultrasonic debridement using a metal tip
C. Ultrasonic debridement using a ceramic tip
D. Debridement with a metallic brush

115. How do adjunctive therapies assist in the management of periodontitis for Mr Christakos?

A. Influence the microflora balance
B. Reduce bleeding on probing scores
C. Regenerate the periodontal tissues
D. Modify the host response to bacteria

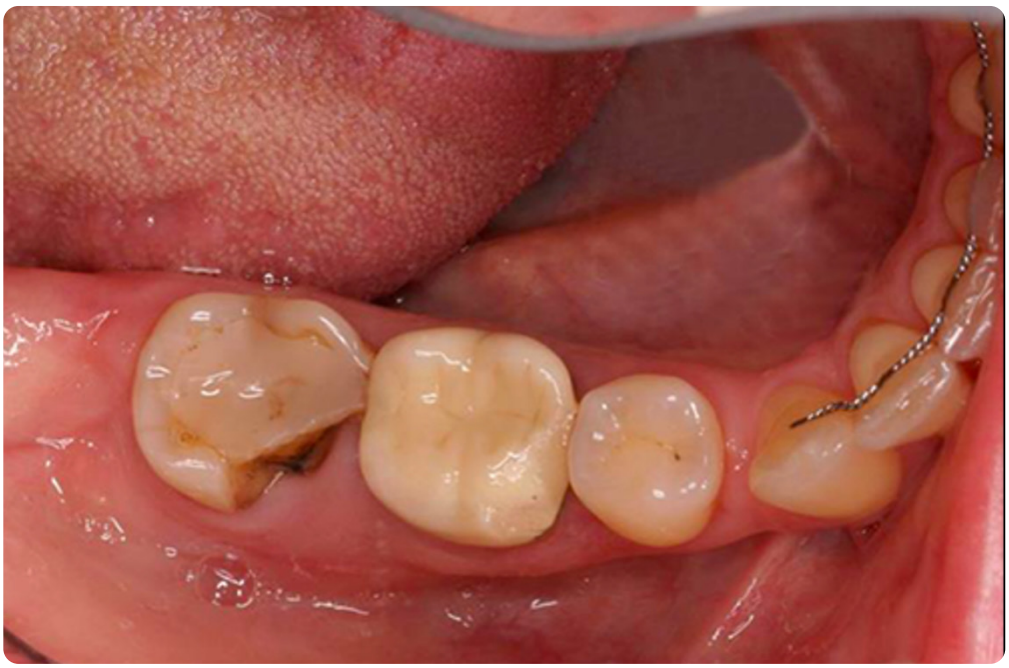
Clinical scenario 24

Question 116 through to 120 refer to the following information

Lucas Souza is a 40-year-old male who presents to your surgery complaining of a broken tooth. The tooth has been sensitive to cold drinks and foods.

Lucas is motivated about oral health and is concerned about the appearance of his teeth. He is very keen to save the tooth at all costs.

He has mild asthma which is controlled with an inhaler combining steroid and long-acting β2-agonist medication (Symbicort).



116. Lucas' symptoms suggest a diagnosis of reversible pulpitis.

What information or test is most useful to confirm this diagnosis?

A. Initial onset of pain
B. Percussion test
C. Periapical radiograph
D. Crack-finder test
E. Transient nature of pain

117. Lucas requests that you provide a crown for the broken tooth "like the one in front of it".

What information is needed to determine the restorability of this tooth?

A. Status of pulpal health
B. Occlusal analysis
C. Depth of fracture margin
D. The previous restorative material used
E. Capacity for a mesio-distal ferrule

118. Your radiographic examination reveals that tooth 46 has a previously completed root canal therapy. However, the mesial root shows a periapical radiolucent lesion. Lucas reports that the tooth is not causing any problems and he doesn't want further endodontic treatment.

What information is required to assist you to act in Lucas' best interest?

A. Examination of occlusion
B. Length of time since completion of root canal therapy
C. Periodontal probing examination
D. Results of a cone-beam computed tomogram (CBCT)
E. Contact details for Lucas' endodontist

119. Lucas reports that during his previous dental treatment in the lower right quadrant, the dentist was not able to provide adequate anaesthesia, resulting in pain during treatment. You would like to reassure Lucas regarding future treatment.

What measures should be taken to manage anaesthetic failure?

A. Provide supplemental infiltration injections
B. Use two different anaesthetic solutions for an inferior alveolar nerve block
C. Prescribe anxiolytics before appointments
D. Use 4% Articaine anaesthetic for an inferior alveolar nerve block
E. Advise that this only occurs in cases of irreversible pulpitis

120. Lucas asks you if asthma can affect his oral health. He reports that he rinses his mouth after using his inhaler.

What measures should you suggest to promote Lucas' oral health?

A. Recommend pit and fissure sealants
B. Prescribe antacid medication
C. Recommend regular oral examinations
D. Prescribe antifungal lozenges
E. Recommend chlorhexidine mouthwash

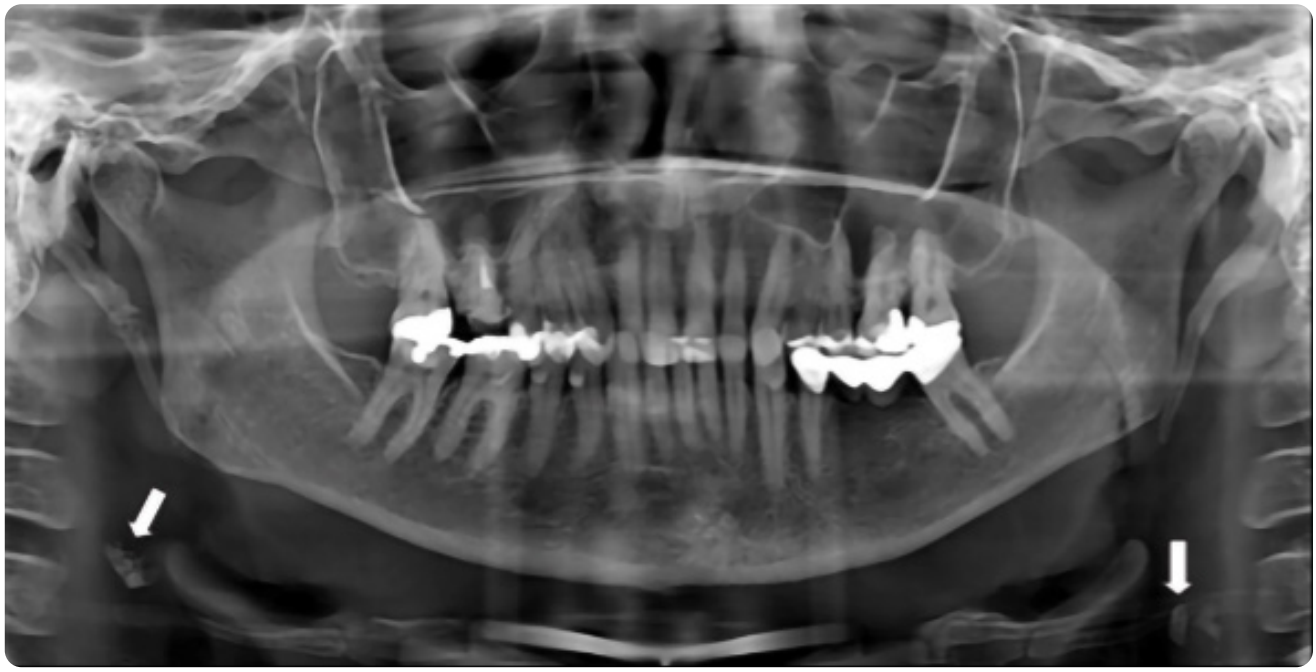
Clinical scenario 25

Question 121 through to 125 refer to the following information

Audrey Donnelly, a 66-year-old female, presents to your dental surgery complaining of a toothache in tooth 16 which has been bothering her for about a week when chewing on hard food, but it is not keeping her awake at night. She also asks you to examine her tongue which has been sore, off and on, for the last year.

Audrey has a history of hypertension along with unstable angina and required a stent three years ago. She takes nifedipine, a calcium channel blocker and clopidogrel, an anti-platelet medication.

Audrey mentions that she is currently being investigated for general fatigue.



121. As part of your data collection, you take a panoramic radiograph. Apart from your dental findings, you are concerned about the radio-opaque areas as indicated by the arrows. You plan to refer Audrey to her general medical practitioner for assessment.

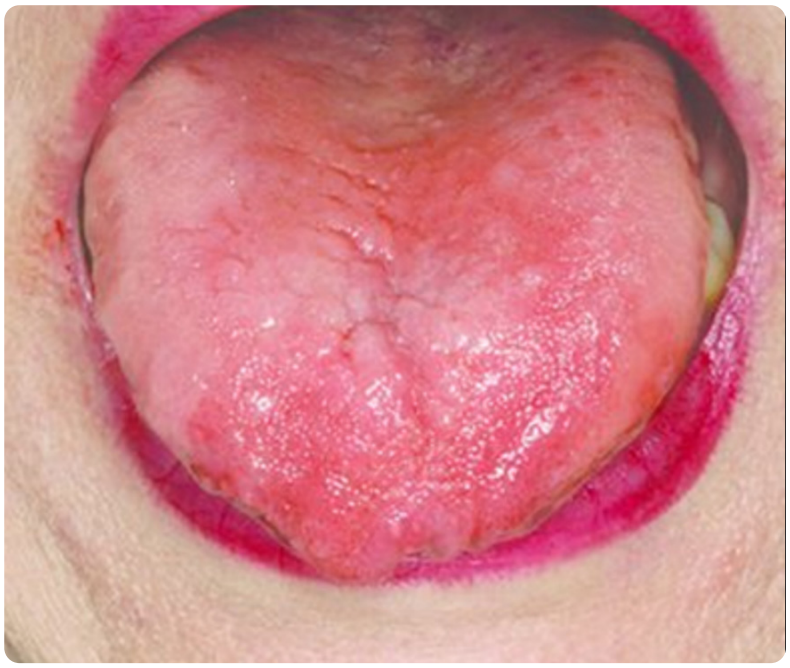
Of the following, which medical condition may be a risk for Audrey?

A. Stroke
B. Renal stones
C. Lymphoma
D. Goitre

122. You examine Audrey's tongue and note that there are several beefy-red patches, mainly on the dorsum of the tongue. She states that she started a vegan diet about 18 months ago and that a recent blood test confirmed normal iron levels.

You suspect a vitamin deficiency is causing the glossitis.

Which vitamin deficiency is most likely to result in this type of glossitis?



A. A
B. B12
C. D
D. E
E. K

123. You have diagnosed tooth 16 as having a necrotic pulp and symptomatic apical periodontitis. Following informed consent, you plan to extract tooth 16 at the next appointment.

In view of Audrey's medical history, what advice would you give Audrey regarding her anti-platelet medication regimen before the extraction?

A. Omit on day of extraction
B. Cease two days prior
C. Halve the dose
D. Substitute with aspirin
E. No changes

124. You have been able to complete the extraction of tooth 16 but notice an associated 2-mm diameter oro-antral communication. You are confident that this won't require surgical management and give Audrey home instructions to facilitate the healing of the socket, thereby avoiding the formation of an oro-antral fistula.

Which of the following is the most appropriate advice for Audrey over the next seven to ten days?

A. Keep mouth closed when sneezing
B. Avoid the use of chewing gum
C. Use chlorhexidine mouth rinses
D. Do not blow the nose
E. Drink warm beverages using a straw

125. Audrey returns to your surgery three days following the extraction complaining of trismus. Audrey has an interincisal opening limited to 20mm and there is a noticeable deviation of the mandible on opening to the right.

What is the most likely cause of trismus?

A. Post-operative infection
B. Internal derangement of the temporomandibular joint
C. Myofascial spasm
D. Temporomandibular joint arthritis

Clinical scenario 26

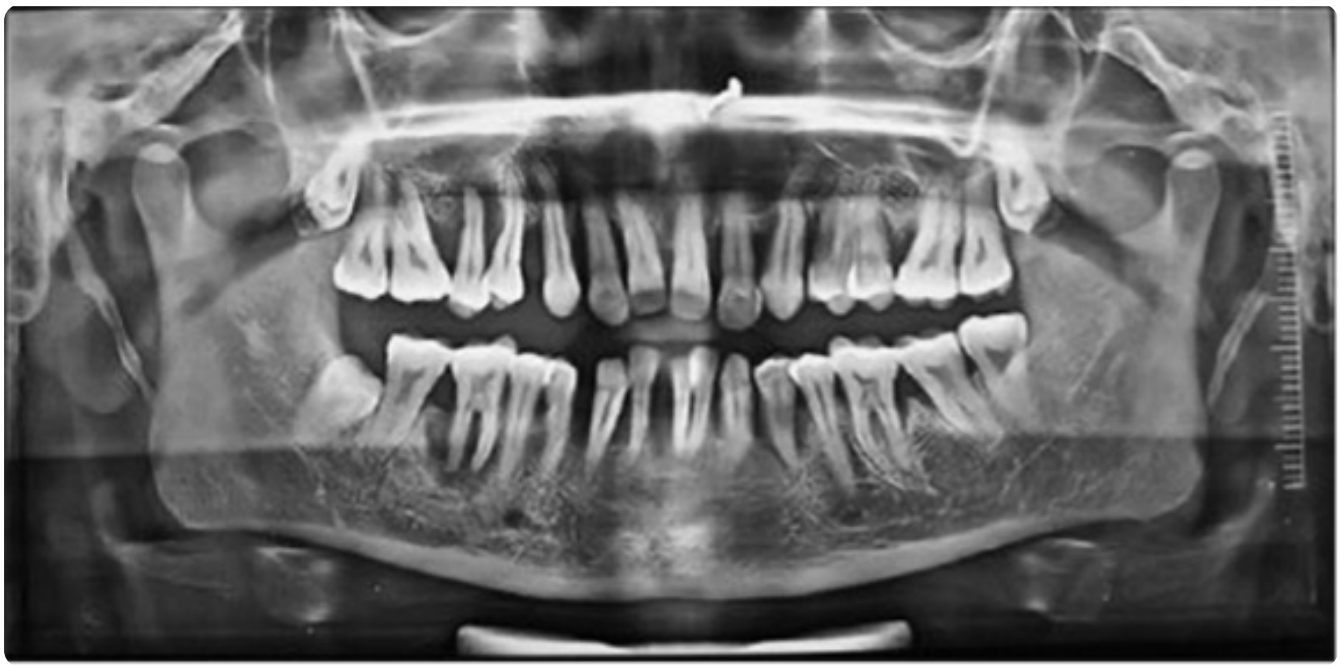
Question 126 through to 130 refer to the following information

Maria Moretti is a 72-year-old lady who has presented to your dental surgery complaining of painful gums, especially on the lower right side. Maria also reports that the "top part of my mouth looks white" and that her sense of taste isn't normal. Additionally, Maria also would like you to look at the inside of her cheeks which "look funny".

She explains that she has also had a long history of pain at the back of her mouth and throat which is worse on swallowing.

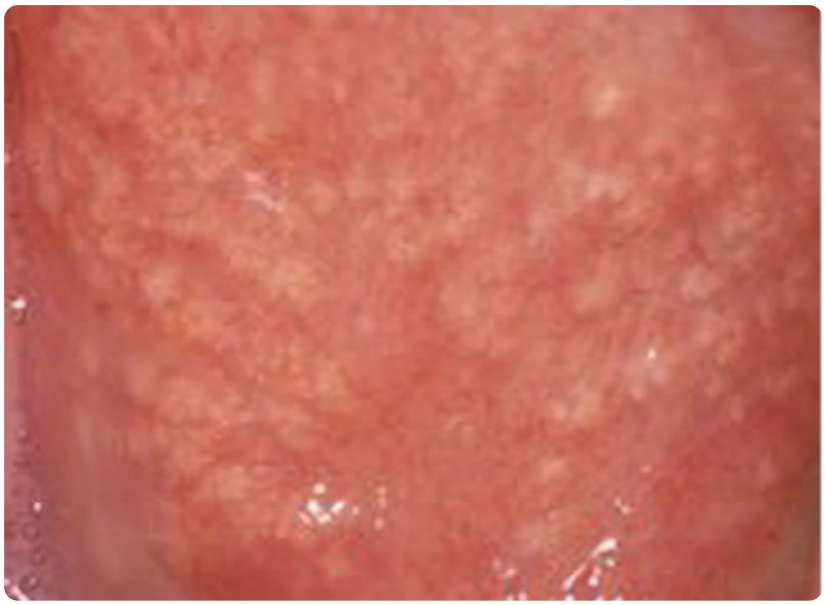
Maria reports a number of medical conditions as follows:

Previous deep vein thrombosis and subsequent pulmonary embolism, requiring long term warfarin
Rheumatoid arthritis, treated with methotrexate
Hypothyroidism (stable) requiring thyroxine
Osteopoenia, treated with vitamin D (calciferol) daily
Asthma requiring an inhaled corticosteroid (fluticasone propionate)



126. While examining Maria's cheeks, you diagnose Fordyce spots as shown in the clinical photograph.

What is the most appropriate management for Maria's Fordyce spots?



A. An incisional biopsy
B. Topical corticosteroids
C. Anti-viral medication
D. Laser therapy
E. No treatment and reassurance

127. After you examine Maria's palate you diagnose acute pseudomembranous candidiasis. You were originally planning to prescribe miconazole oral gel.

Which of Maria's medications would contraindicate miconazole?

A. Calciferol
B. Fluticasone propionate
C. Methotrexate
D. Thyroxine
E. Warfarin

128. You explain to Maria that she is suffering from severe periodontal disease.

Today you planned to do the debridement of quadrants 1 and 4, as well as the extraction of tooth 46. Unfortunately, you have been having trouble anaesthetising Maria and have had to repeat a few injections. Additionally, you have had two positive aspirations during the inferior alveolar block injection.

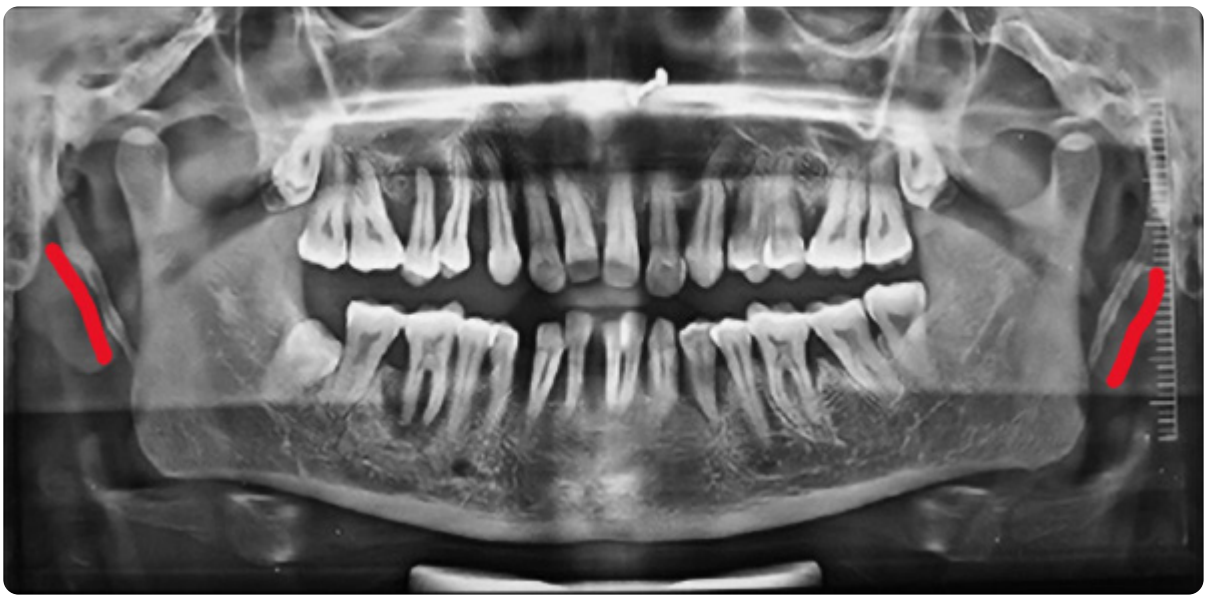
You sense that Maria is not well, and you are very concerned that Maria may have toxic levels of local anaesthetic in her system as she is exhibiting an early sign of toxicity.

Which of the following is most likely to suggest very early local anaesthetic toxicity?

A. Hypotension
B. Hyperventilation
C. Diffuse rash
D. Wheezing
E. Excitability

129. You reassess Maria's panoramic radiograph and wonder if there might be anything to explain her pain at the back of the mouth which is worse on swallowing.

Which calcified ligaments (adjacent to the red lines) are shown in this radiograph and which might be associated with her pain?



A. Stylothyroid
B. Stylocricoid
C. Stylohyoid
D. Stylopharyngeal

130. You review Maria's panoramic radiograph and note that the periapical regions of many maxillary teeth are obscured by a radiolucent band. You recognise this as an artefact produced during the exposure of the sensor.

What is the best way for the patient to prevent this occurring?

A. Keep the tongue still
B. Avoid slouching
C. Place the tongue in contact with the palate
D. Ensure the patient is not too far forward
E. Ensure the head is not tipped downwards

Clinical scenario 27

Question 131 through to 135 refer to the following information

Jacob is an 18-year-old patient who has been referred to you for an occlusal resin composite restoration in tooth 16.

Jacob's medical history is unremarkable.

You have administered local anaesthetic, placed a dental dam to isolate tooth 16 and have commenced cavity preparation.

Part-way through the procedure, Jacob feels unwell. His skin is cold and pale, and his pulse is weak.

131. What is the most likely reason for Jacob's symptoms?

A. Coronary thrombosis
B. Cerebrovascular accident
C. Pre-syncope episode
D. Hypersensitivity to lidocaine
E. Allergy to latex

132. What is the most appropriate immediate action?

A. Monitor the patient's pulse
B. Call for an ambulance
C. Assist breathing using a bag-valve-mask
D. Ensure the patient is in a horizontal position
E. Administer intramuscular adrenaline

133. Fortunately, Jacob recovers within a few minutes.

However, what signs or symptoms would have indicated the need to commence cardio-pulmonary resuscitation?

A. Normal breathing but unresponsive
B. Central chest pain radiating to left arm
C. Absence of breathing and unresponsive
D. A slow and irregular pulse
E. Swelling around lips and front of neck

134. At a subsequent appointment, you are performing a dental prophylaxis and the polishing cup dislodges from the handpiece and disappears behind the dorsum of the tongue.

What should you do first to assist Jacob?

A. Place in the lateral recovery position
B. Encourage coughing in an upright position
C. Administer repetitive chest thrusts
D. Perform five abdominal thrusts
E. Perform up to five back blows

135. You decided to telephone for an ambulance.

Which number will connect to ambulance services in Australia?

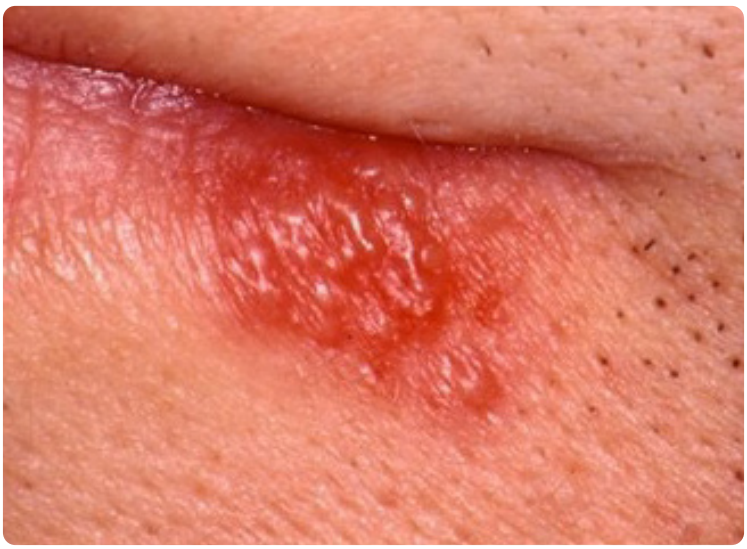
A. 911
B. 999
C. 000
D. 131 444
E. 110

Clinical scenario 28

Question 136 through to 140 refer to the following information

John, a 30 year-old student, attended your practice two days ago for scaling and debridement. You provided local anaesthesia for the sensitive lower anterior teeth at John's request. John is in good health, but he tells you that he is a smoker and drinks regularly.

He informed you at your last appointment that he is very stressed due to his university workload and often goes out partying with friends on the weekend to de-stress. John also advised you that he is typically anxious when receiving dental treatment.



136. John returns two days later with a red blistery lesion on his lower lip which appeared approximately 24 hours after he left your clinic. He asks if this may be related to the treatment you provided.

What initial step would you take to investigate the possible cause of this lesion?

A. Review your notes
B. Refer for a biopsy
C. Apply suitable medication
D. Take a clinical photo

137. After a careful review of your notes of John's last appointment and thorough questioning, you feel that you have excluded iatrogenic causes of his lip lesion.

Based on your observations and John's patient history, what is the most likely diagnosis for this lesion?

A. Primary herpetic gingivostomatitis
B. Herpes zoster
C. Secondary herpes simplex
D. Erythema multiforme
E. Herpangina

138. After diagnosing the lesion on John's lip, what further advice would it be most important to give John regarding the lesion?

A. It needs to be reviewed by a specialist
B. A biopsy needs to be done to confirm the diagnosis
C. A swab test needs to be done to confirm the diagnosis
D. It could be contagious
E. It could be spreading to other areas of the body

139. You carefully review your notes of John's last appointment and thoroughly repeat his medical and dental history. You make a diagnosis then recommend appropriate treatment for his lip and arrange a review appointment.

Due to John's initial complaint that your treatment caused this lesion, in addition to comprehensively noting all complaints, discussions and actions by both parties in your records, what does the Dental Board of Australia's Code of Conduct advise you to do?

A. Offer to refund John's fee if he drops the complaint
B. Ask John to counter-sign the notes
C. Wait to see if John takes the complaint further
D. Notify your professional association
E. Notify your professional indemnity insurer

140. What is the most appropriate treatment to recommend John to address for his lip lesion?

A. Apply betamethasone dipropionate 0.05% ointment twice daily after meals
B. Apply acyclovir 5% cream four-hourly for at least four days
C. Apply chlorhexidine 1% to the area every three hours until healed
D. Apply miconazole 2% oral gel after eating for seven days, or until healed
E. Apply azithromycin 2% ointment after drying the area well, three times daily

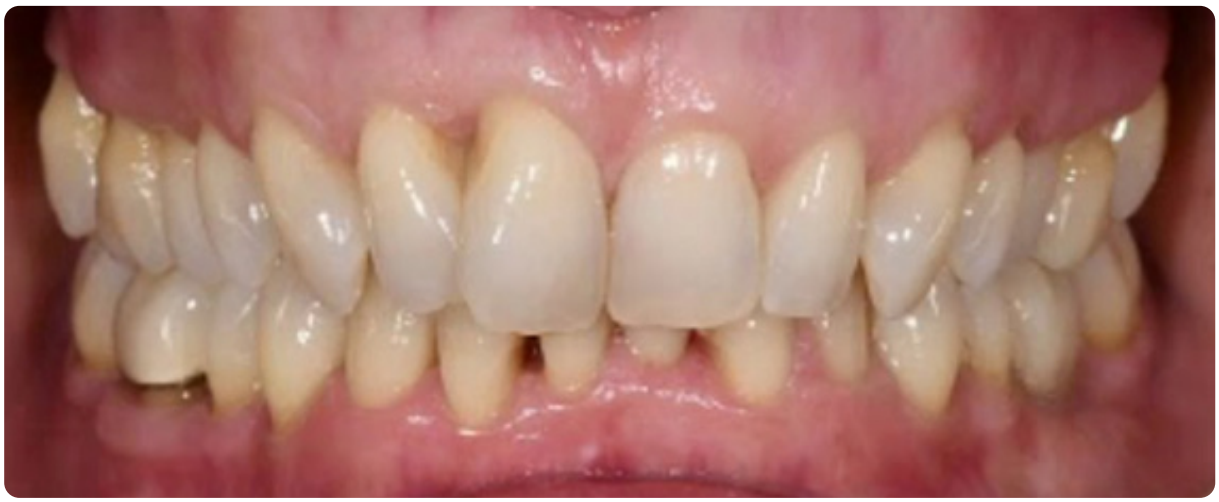
Clinical scenario 29

Question 141 through to 145 refer to the following information

Sarah, a 45-year-old female was diagnosed with periodontitis and had non-surgical periodontal treatment last year. She was unable to obtain a copy of her records or radiographs before coming to your clinic for periodontal maintenance therapy, as her old dental practice closed down.

Sarah has type 2 diabetes mellitus, with a glycated haemoglobin (HbA1c) of 9%, noted at a blood test last week. She is a smoker and has reduced smoking from twelve to two cigarettes a day. However, she could never give up smoking completely.

You note her deep overbite and that tooth 46 has a crown with a mesial overhang and grade I mobility. You obtain a panoramic radiograph that indicates the worst bone loss was around the upper second molars, extending to the middle third of the roots.



141. What in the clinical findings defines the stage of Sarah's periodontal disease?

A. The excessive forces of her deep bite
B. The overhanging crown margin on tooth 46
C. The amount of radiographic bone loss
D. The smoking habit past and present
E. The level of HbA1c in her blood

142. You intend to find out if the previous treatment stabilised her periodontitis.

What is the most appropriate calculation you could use to estimate the rate of her periodontitis progression?

A. Percentage of bone loss relative to her age
B. Her plaque index
C. Bleeding on probing score
D. Clinical attachment loss at the most affected site
E. Percentage of teeth with mobility and furcation involvement

143. You are positioning your periodontal probe for periodontal charting.

To probe the disto-labial surface of tooth 11, what fulcrum position will give you the most precise measurement?

A. Zygoma
B. Chin
C. Finger on finger
D. Lower arch
E. Upper arch

144. You completed full mouth periodontal charting. Your measurements at the disto-labial surface of tooth 11 include recession of 3mm and probing depth of 4mm.

What is the clinical attachment loss at this site?

A. 1mm
B. 3mm
C. 4mm
D. 7mm

145. You investigate Sarah's willingness to quit smoking and Sarah advises that she is interested.

What is the most effective action that should be taken to help Sarah quit?

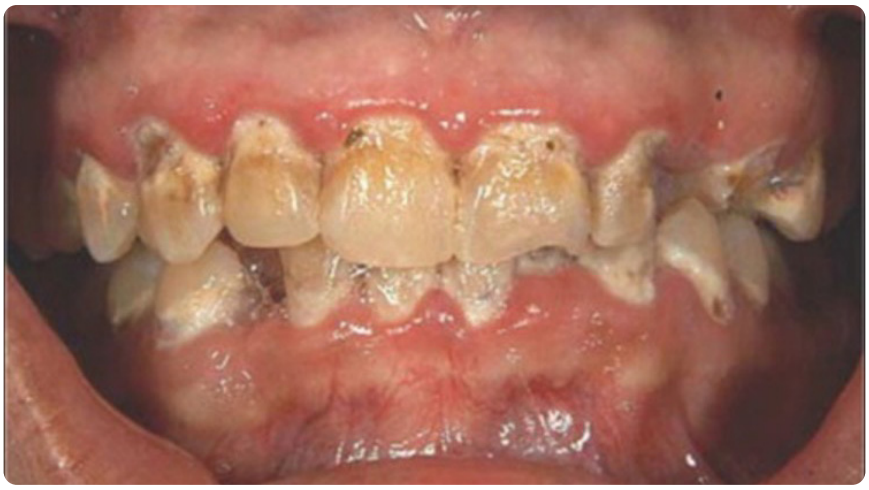
A. Flag in her dental file to re-assess her habit at the next recall
B. Set a quit date and develop a realistic achievable plan
C. Reassure her that there are coping strategies for any symptoms of quitting
D. Advise of the risk of premature death with smoking

Clinical scenario 30

Question 146 through to 150 refer to the following information

Rain Rammeloo, a 20-year-old male, has been referred to you for a professional scale and clean.

Rain admits a history of previous methamphetamine use. He has been free of his drug use habit for six months.



146. Although Rain is no longer using methamphetamine, you are concerned that his previous drug use may affect your management.

What ongoing effect is most likely from his previous drug use?

A. Obesity
B. Hypoglycaemia
C. Behavioural changes
D. Hypersomnia

147. You observe that the caries pattern in Rain's teeth is frequently found in methamphetamine users and is sometimes referred to as 'meth mouth'.

What surfaces are most likely to be more affected by caries in patients with "meth mouth''?

A. Buccal and labial surfaces
B. Incisal and occlusal surfaces
C. Palatal and lingual surfaces
D. Cervical and approximal surfaces

148. Extensive caries is commonly seen in methamphetamine users.

Apart from very poor oral hygiene and dry mouth, what is the other main contributing factor to Rain's caries?

A. Infrequent dental visits
B. Consuming sweet carbonated drinks
C. Long periods of intoxication
D. Nausea and vomiting
E. Lack of fluoride toothpaste

149. Rain's teeth are sensitive and he requests that you administer local anaesthetic for his treatment.

Considering his history, what is the most appropriate choice of anaesthetic?

A. Topical anaesthetic only
B. Dental anaesthetic with vasoconstrictor
C. Dental anaesthetic without vasoconstrictor
D. Any anaesthetic at double the usual dose
E. Any anaesthetic at half the usual dose

150. Rain's dental treatment has been completed and he returns to you six months later for his recall appointment.

Rain has been taking a selective serotonin reuptake inhibitor (SSRI) medication to manage his anxiety, and reports to you that he has been experiencing a dry mouth.

What is the main benefit of good quality saliva?

A. Promotes the growth of lactobacillus
B. Decreases the pH of the oral environment
C. Facilitates remineralisation of tooth enamel
D. Acts as a vehicle for calcium hydroxyapatite
E. Delays carbohydrate breakdown

Clinical scenario 31

Question 151 through to 155 refer to the following information

Mrs Lim, a 45-year-old patient, has been referred to you by a dentist in the practice for deep scaling of several periodontal pockets.

Following discussion with Mrs Lim, you administer local anaesthetic in the lower anterior region by infiltration with a 20-mm ('short') needle.

151. You accidentally sustain a needlestick injury from the local anaesthetic needle.

What immediate action should you take after removing your gloves?

A. Squeeze the wound to expel blood
B. Apply an iodine-based disinfectant to the wound area
C. Apply a wound dressing
D. Wash the wound with soap and water
E. Apply an alcohol-based hand rub to the wound area

152. The Australian Dental Association (ADA) protocol for needlestick injuries requires that you have a blood test for viral antibodies.

Within what time period after the injury should this be done?

A. Twenty-four hours
B. One week
C. Two weeks
D. Six weeks

153. In consultation with your dental colleagues, you discuss how to prevent a needlestick injury after administering a local anaesthetic.

What is the best way to make safe a used, exposed needle?

A. Hold the needle-syringe assembly in one hand and replace the needle sheath with the other hand
B. Hold the needle-syringe assembly in one hand and unscrew the needle with the other hand
C. Place the needle-syringe assembly on the bracket table and cover the needle with gauze
D. Hold the needle-syringe assembly in one hand and unscrew the needle with needle holders
E. Place the needle-syringe assembly in the contaminated zone of the bench top

154. After having removed the needle from the syringe, you drop the needle into a sharps container.

Where should the container be located?

A. Close to the waste bin
B. Near the point of use
C. In the sterilisation area
D. Above the hand washing sink
E. In an overhead cupboard

155. You also discuss with your dental colleagues, the general topic of infection control.

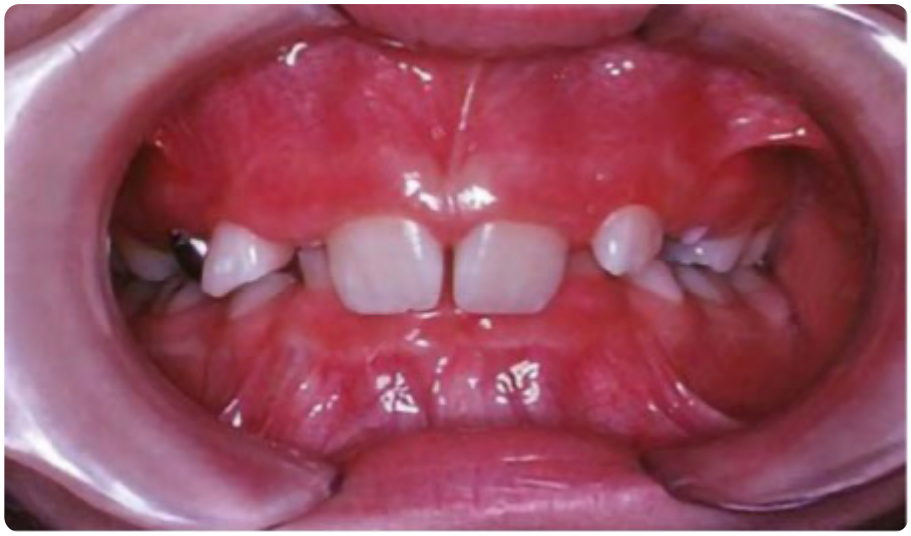
Which of the following instruments is defined as 'semi-critical' according to the Spaulding classification?

A. Mouth mirror
B. Safety glasses
C. Shade guide
D. Extraction forceps
E. Stainless steel matrix band

Clinical scenario 32

Question 156 through to 160 refer to the following information

Jane is an 11-year-old new patient brought to your practice by her mother for a routine dental examination.



156. As part of your clinical examination, you record the information in the attached chart.

Based on this information, what is most unusual about the timing and sequence of Jane's teeth eruption?

16	55	54	53		11	21	22	23	64	65	26
46	85	84	83	42	41	31	32	73	74	75	36

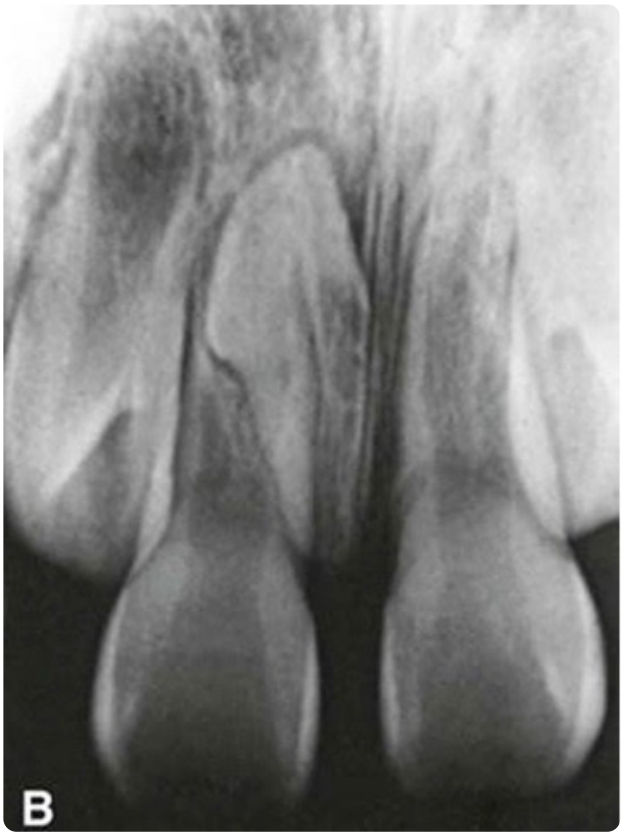
A. Teeth 53 and 54 are still present at age eleven
B. Tooth 23 is erupting before tooth 53 has exfoliated
C. Tooth 23 is erupting before tooth 12
D. Tooth 22 has erupted before tooth 12

157. What is the most significant clinical finding evident in the photograph?

A. Congenitally missing tooth 12
B. Midline diastema
C. Deep anterior over-bite
D. Tooth 53 is labially proclined

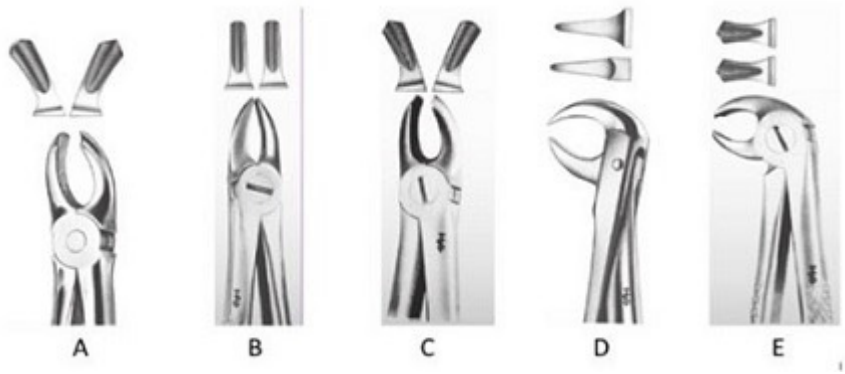
158. You take a radiograph to investigate the eruption of tooth 12.

What significant dental anomaly have you discovered?



A. Transposition of tooth 13
B. Root fracture of tooth 11
C. Dilaceration of the root on tooth 11
D. Taurodontism
E. Inverted mesiodens

159. If it becomes necessary to extract tooth 55, which are the most appropriate extraction forceps to select?



A. A
B. B
C. C
D. D
E. E

160. You determine that referral to a specialist orthodontist is required.

What is the most likely immediate treatment option the orthodontist may recommend?

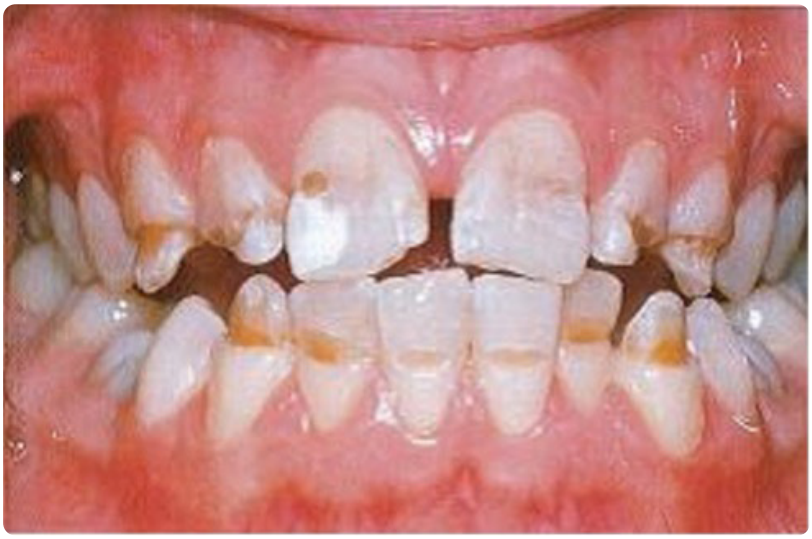
A. Serial extraction in the lower arch which is at risk of crowding
B. A bite plane to encourage intrusion of the lower incisors and molar eruption
C. Removable appliance to align the anterior teeth and allow normal growth
D. Extract tooth 22 with a view to moving teeth 13 and 23 into symmetrical positions
E. Treatment with sequential clear aligners to realign the teeth

Clinical scenario 33

Question 161 through to 165 refer to the following information

Marcus is 13 years old and he has not had a dental check-up for five years. Marcus' mother Judy has brought him to see you as he has been experiencing pain when eating cold or sweet food. Marcus' mother is also concerned that Marcus rarely smiles now because he is embarrassed about the appearance of his teeth.

On examination you note that some of Marcus's maxillary, mandibular anterior teeth (13–23, 33-43) and the four first permanent molars are affected by pitting and staining. None of his other teeth are affected.



161. What is the most likely diagnosis for Marcus's presenting condition?

A. Enamel hyperplasia
B. Enamel hypermineralisation
C. Enamel hypoplasia
D. Amelogenesis imperfecta
E. Enamel decalcification

162. Marcus's mother tells you that the defects in his teeth were present as they erupted into his mouth and asks you why it has happened.

Based on average dental development, the location of the pitting and staining and the number of teeth affected, what is the most likely cause of Marcus's dental condition?

A. Systemic factors
B. Local factors
C. Genetic factors
D. Traumatic factors

163. On examination you note that the occlusal surfaces of Marcus's lower first molars (teeth 36 and 46) have defects in the enamel with associated moderate breakdown of the occlusal enamel surfaces.

What is the most appropriate restorative treatment for Marcus's lower first molars?

A. Placement of stainless-steel crowns after tooth reduction
B. Placement of resin composite restorations
C. Application of fluoride and monitor for caries
D. Placement of resin-based fissure sealants

164. What treatment to improve the aesthetics of Marcus' affected teeth would be most appropriate at this stage?

A. Porcelain crowns on the maxillary teeth and mandibular anterior teeth
B. Microabrasion and fluoride remineralisation of all anterior teeth
C. Porcelain veneers on the maxillary and mandibular anterior teeth
D. In-office tooth whitening of maxillary and mandibular anterior teeth
E. Resin composite restorations on the maxillary and mandibular anterior teeth

165. Although Marcus came to see you about the enamel defects in his teeth, you also notice his lower deciduous second molars (teeth 75 and 85) are still present and are not mobile. They also appear to be 'sunken' below the occlusal plane.

What is the most common cause of this condition?

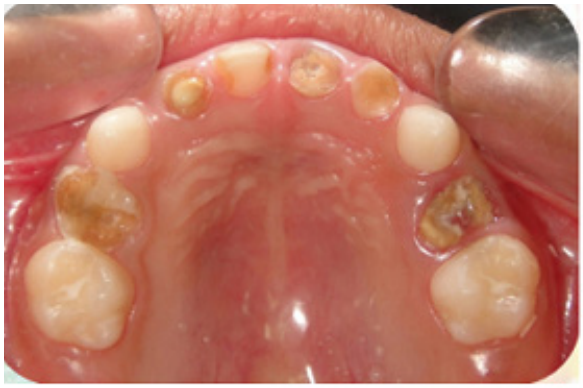
A. Malposition of the tooth germ of the deciduous teeth
B. Ankylosis of the deciduous second molars
C. Supernumerary teeth in the path of eruption
D. Regular application of topical anaesthetic gel to the soft tissues
E. Abnormal resorption of the roots of the deciduous teeth

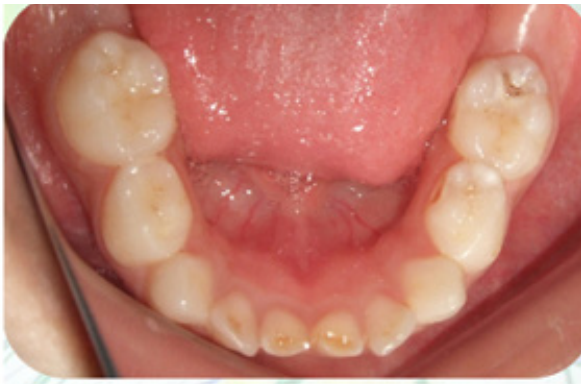
Clinical scenario 34

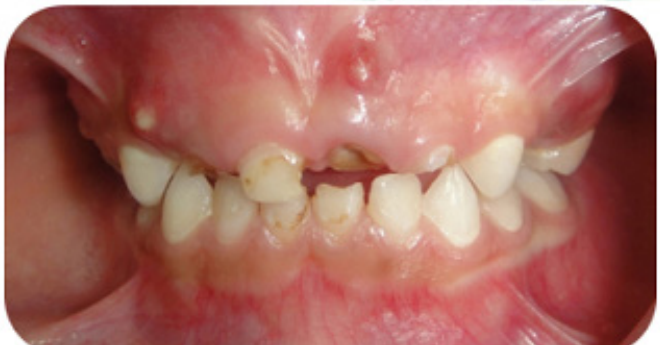
Question 166 through to 170 refer to the following information

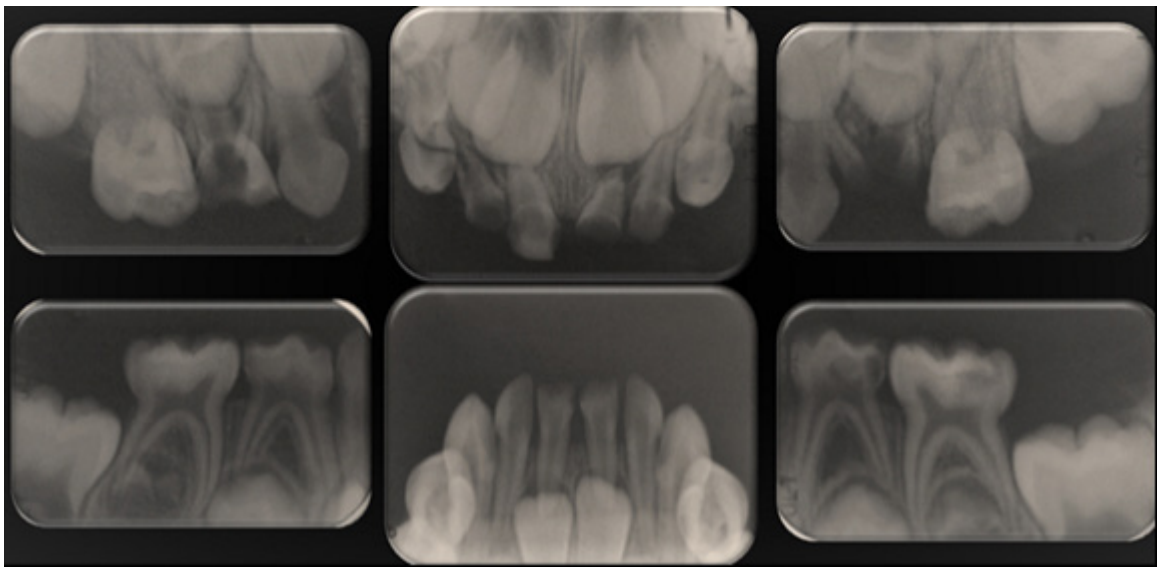
Elisa, a pre-school girl, presented today with her parents, Mr and Mrs Lewis for a check-up appointment. Her parents are concerned as Elisa regularly complains of pain when drinking and chewing on the lower left side of her mouth. They also state that "Elisa does not have front teeth".

Elisa's parents referred to her as a healthy child without any relevant medical history. She was cooperative during the appointment and you were able to take radiographs and photographs as shown below.









166. During examination you notice that Elisa has all her primary anterior teeth present, but they are extensively decayed. Elisa's parents tell you that she had her first visit to the dentist six months ago at another practice before they moved to Melbourne. The previous dentist applied fluoride varnish on Elisa's teeth, sealed teeth 55 and 65, and advised them to bring Elisa back for a follow-up in six months.

Based on what you have observed, what additional measure would have been most useful in this case?

A. None; the treatment done was appropriate as prevention is always the first option in young children
B. A medical referral would have been the appropriate approach in this case
C. Removal of all carious teeth at her first visit
D. Implement immediate intervention and preventative measures
E. None; no treatment was required as Elisa's primary teeth would be soon replaced by permanent teeth

167. According to the intraoral photographs and the radiographs provided, what would be Elisa's estimated chronological age?

A. 1–2 years old
B. 2–3 years old
C. 4–5 years old
D. 5–6 years old

168. What additional information would be relevant to ask Elisa's parents to establish the most probable aetiology of her current dental condition?

A. Dietary habits
B. Toothbrushing frequency
C. Medical history and medications
D. Family history
E. Socioeconomic status

169. You notice that Elisa is wearing long sleeves on a very sunny and warm day. She also seemed a bit unsettled and uncomfortable when she was helped and carried to the dental chair by one of her parents.

What should you be suspicious of?

A. A recent accidental injury
B. Extreme shyness
C. Intellectual disability
D. Child abuse and neglect
E. Psychomotor impairment

170. You have completed your evaluation of Elisa and established the main aetiological factors involved.

After adequate preventative care has been provided, which of the following options is the most important to address first as part of Elisa's definitive treatment plan?

A. Extraction of all maxillary primary incisors due to their hopeless prognosis
B. Pulpectomy and stainless-steel crown on tooth 54
C. Restoration of tooth 84
D. Extraction of teeth 54 and 64
E. Pulpotomy and stainless-steel crown on tooth 75

Clinical scenario 35

Question 171 through to 175 refer to the following information

Marybell, an 11-year-old schoolgirl, comes to your practice with an avulsed front tooth, which happened six hours ago when she fell face down on the ground while playing football at an outdoor stadium. She has been playing football for the past two years.

Her mother, who is your cousin, was busy at that time and asked Marybell to keep the tooth in cling wrap near an ice pack in her lunch box.

Marybell has a history of Class II division 1 malocclusion.

Socially, you know that her mother tends to be vocal about her daughter at family gatherings and discusses openly any issue her daughter has.

Marybell's upper lip is swollen, but she seems fine otherwise. She gives you her tooth 21 wrapped in cling wrap.

171. What immunisation history is important to collect from Marybell's mother for an appropriate treatment plan?

A. COVID-19
B. Influenza
C. Hepatitis B
D. Meningococcal B
E. Tetanus

172. What is the most likely status of the periodontal ligament cells of Marybell's tooth 21?

A. Non-viable
B. Compromised and likely low functioning
C. Compromised but likely high functioning
D. Viable

173. Marybell's mother asks you to "fix Marybell's tooth" and expects that your treatment will bring the tooth back to normal soon. When you explain the potential complications of tooth avulsion, Marybell's mother becomes upset and is not willing to accept any negative outcome.

What is the best way to approach her response in a professional manner?

A. Reassure her that you are in the best position to provide comprehensive care for your niece
B. Point out that you are not only her cousin, but also a qualified dental professional
C. Suggest that you refer her to a paediatric dentist after replanting and splinting the tooth
D. Encourage her to consider the matter and reach out to you at any time, whether during business hours or after hours
E. Postpone the discussion until the next family gathering when a final decision can be made

174. You are concerned about Marybell's lack of awareness of how to save her teeth after she receives a blow to her mouth.

What is the most appropriate first-aid advice you should give to Marybell to minimise complications for any future tooth avulsion, while seeking immediate dental treatment?

A. Find the tooth immediately and hold it by the yellow part
B. If the tooth is contaminated, soak it for at least 10 minutes in cold water
C. Put the tooth back in the socket as soon as the match is over
D. If the tooth cannot be put back immediately, place it in a cup of milk

175. What is the most appropriate measure that you should recommend to Marybell to prevent tooth avulsion for the remainder of the football season?

A. Wear protective head gear
B. Use a custom-made mouthguard when playing football
C. Commence orthodontic treatment to correct her malocclusion
D. Discuss dental trauma prevention in the football team meetings

Clinical scenario 36

Question 176 through to 180 refer to the following information

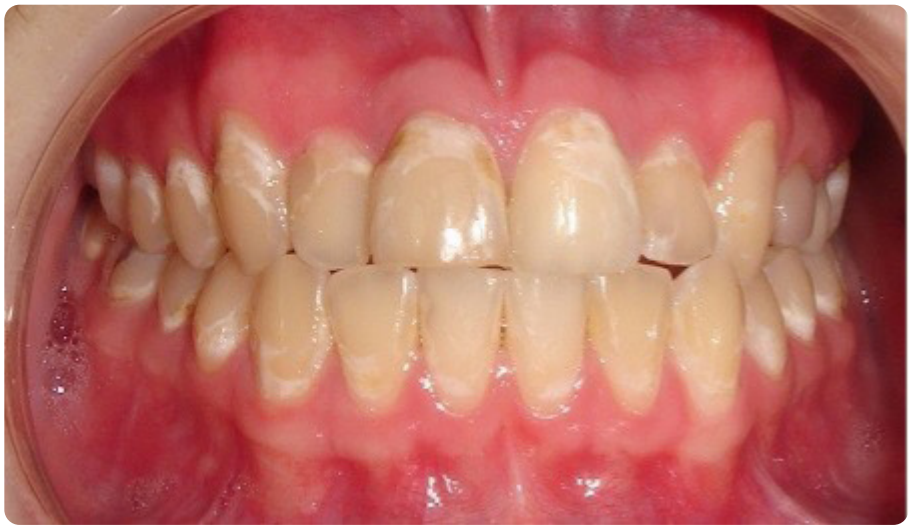
Jade, a 15-year-old patient, presents to your surgery. She is very upset about the appearance of "all these white marks on my teeth".

Her orthodontic brackets were removed four weeks ago after the orthodontist said she was not keeping her teeth clean enough. Since then, Jade has cleaned her teeth "four times a day but the white marks won't go away".

Bitewing radiographs further indicate widespread very early approximal demineralisation with potential approximal caries into dentine on several teeth.

Jade advises that she drinks at least two litres of cola drink daily and is allergic to penicillin, milk, dairy products and fish.

Jade takes Polaramine (dexchlorpheniramine) antihistamines for hay fever.



176. Jade complains of a dry mouth.

What is the most likely cause of her xerostomia?

A. Overzealous toothbrushing
B. Poor oral hygiene
C. Inadequate water intake
D. History of orthodontic treatment
E. Her medication

177. What is most likely the main cause of the white lesions that have developed on Jade's teeth?

A. Orthodontic treatment
B. Plaque retention
C. Recreational drug use
D. Poor diet
E. Acidic drinks

178. What is the most appropriate investigative step to take next in order to address Jade's presenting complaint?

A. Bitewing radiographs every three months
B. Interproximally placed caries detector solution
C. Probing for cavitation using a Briault probe
D. Interproximal use of dental floss
E. Caries risk assessment

179. You are formulating an oral health preventive regimen for Jade.

In determining which therapeutic, remineralisation product to recommend for Jade, what is most important to consider from her history?

A. Soft drink intake
B. History of orthodontic treatment
C. Allergy to penicillin
D. Dairy allergy
E. Use of antihistamines

180. Jade has removable retainers, which she has not worn since her braces were removed.

What is the most significant limitation of removable appliances?

A. Achieving compliance from uncooperative patients
B. Oral hygiene maintenance is difficult
C. They are more expensive than fixed retainers
D. Adjustment is challenging for the orthodontist
E. They cause hyposalivation

Clinical scenario 37

Question 181 through to 185 refer to the following information

You are visiting a local rugby club in order to run a campaign for oral health promotion and prevention of trauma. The team is comprised of teenagers between 14 and 15 years of age. You speak to the club manager who advises you that the players wear sports mouthguards.

You notice the team consumes sports drinks before inserting their mouthguards, to replace electrolytes and avoid dehydration during training sessions and matches.

181. What is the most appropriate type of sports mouthguards for the players of the club you are visiting?

A. Stock
B. Bimaxillary
C. Laminated
D. Mouth-formed
E. Custom-made

182. What is the most appropriate advice to provide the rugby team to prevent dental caries and erosion?

A. Limit consumption of sports drinks to after training and matches
B. Sports drinks to be replaced with water
C. Sports drinks to be consumed at 10 minute intervals
D. Only sugar-free sports drinks to be consumed

183. The club manager's description of the players' dietary habits concerns you.

What is the highest oral health risk to these local rugby club players?

A. Dental erosion
B. Dental trauma
C. Dental abfraction
D. Xerostomia

184. When should the rugby club players replace their mouthguards?

A. When the mouthguards discolour
B. When they play another contact sport
C. If they have had dental treatment
D. Every year

185. What is the best half-time snack that you would recommend the players to maintain good oral health?

A. Caramel muesli bar
B. Dark chocolate squares
C. Yoghurt based smoothie
D. Orange wedges

Clinical scenario 38

Question 186 through to 190 refer to the following information

Troy, a 12-year-old boy attending boarding school, presents with his mother Jenny.

Troy is attending for his six-monthly topical fluoride application which you initiated six years ago, following restoration of carious lower primary molars.

His upper first permanent molars have enamel demineralisation around the pits and fissures, and his second permanent molars have partially erupted.

Troy does not brush his teeth regularly and does not floss. His dietary analysis reveals that he has sugar with all his main meals but tends to snack on cheese and fruit.

Troy also plays in the school football club and is diligent in wearing his mouthguard, however, says he rarely drinks water because he is always too busy and does not like sports drinks.

Troy's medical history reveals that he had a severe asthma attack three months ago, for which he was hospitalised and has allergies to the adhesive in bandage plasters.

186. In assessing Troy's oral hygiene, you note visible plaque and staining on the labial surfaces of the upper teeth. You also observe that Troy's gingival margins are red and swollen and his salivary flow appears to be low.

What clinical finding during your examination today is most indicative of ineffective oral hygiene practice?

A. Gingival inflammation
B. Lack of flossing
C. Teeth staining
D. Pit and fissure caries
E. Low salivary flow

187. You commence Troy's caries risk assessment.

Which of the following factors would be considered the most effective in caries prevention for Troy?

A. Consumption of non-sugary snacks between main meals
B. His family's high socio-economic status
C. Regular attendance for topical fluoride applications
D. His avoidance of sports drinks

188. You continue assessing Troy's caries risk.

What is the most significant risk factor contributing to Troy's caries?

A. His partially erupted second molars
B. He has sugar with his main meals
C. His history of dental caries
D. His low salivary flow

189. You aim to change Troy's behaviour with regards to maintaining adequate hydration.

What intervention is most likely to be effective in supporting Troy to improve his water drinking habits?

A. Provide Troy with expert advice on the importance of hydration for his oral health
B. Explain the long-term consequences of poor hydration on Troy's teeth and explore ways he can improve
C. Set a clear date when Troy should start drinking two litres of water daily, recording this in a diet diary
D. Ensure Troy's mum Jenny takes direct responsibility to check the amount of water he drinks daily
E. Counsel Troy about the benefits of hydration and instill in him a feeling of guilt for his current drinking habits

190. Considering Troy's medical history, what fluoride containing product should be avoided?

A. Chlorhexidine and fluoride gel
B. Fluoride varnish
C. Fluoride mouthrinse
D. High concentration fluoride toothpaste
E. Casein phosphopeptide-amorphous calcium phosphate fluoride

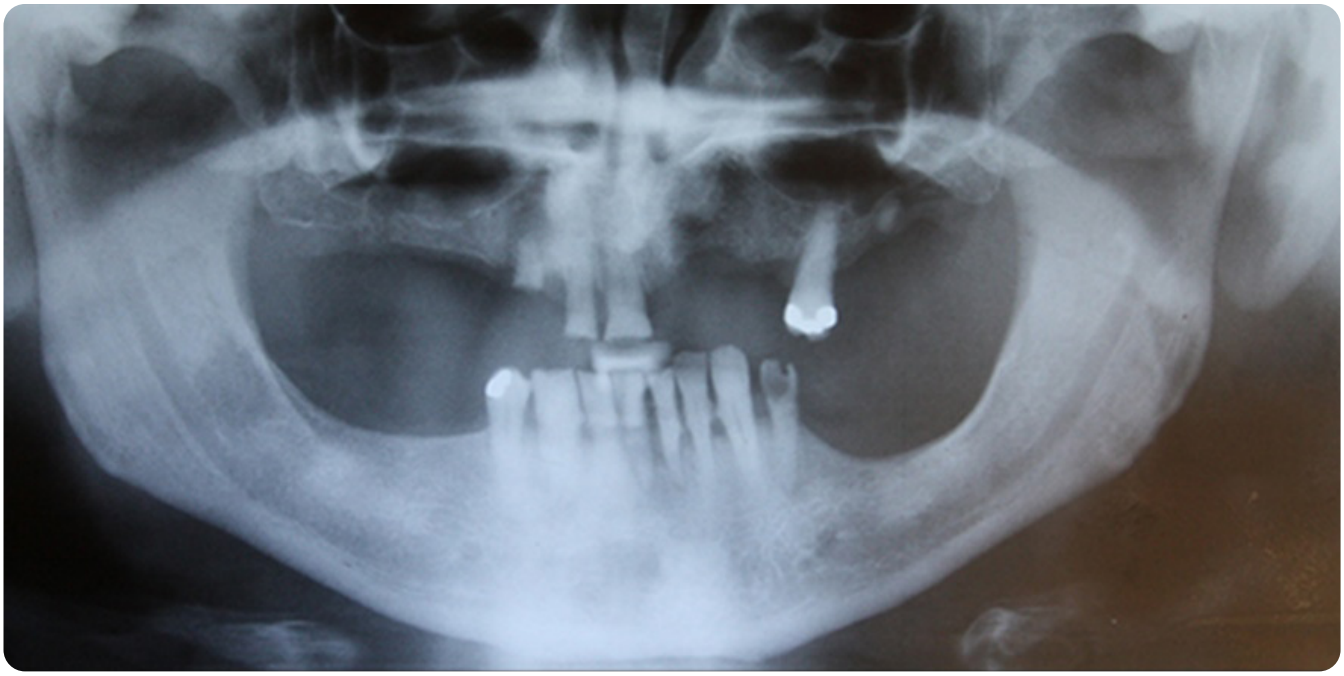
Clinical scenario 39

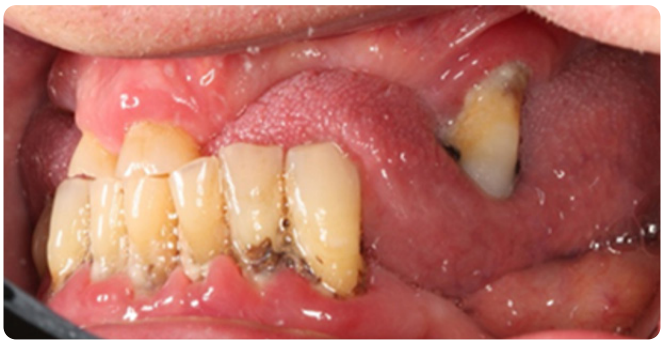
Question 191 through to 195 refer to the following information

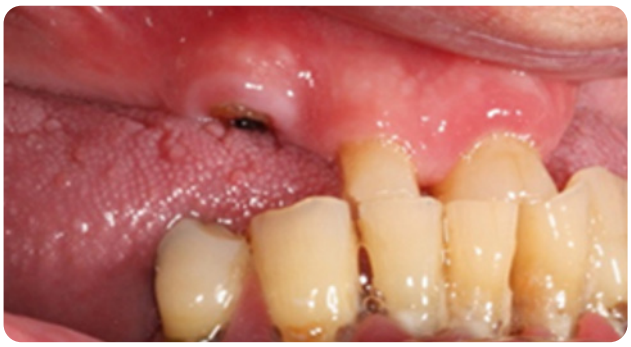
Mr Smith, a 62-year-old male, presented to see you saying that "I am at a stage in my life that I need new teeth". Mr Smith tells you he is not a regular dental attender, and that he had extractions for any teeth that needed treatment.

Mr Smith has been diagnosed with liver cirrhosis six years ago. He was an alcoholic for 30 years and quit just a few years ago.

After you go through the patient history and conduct an examination for Mr Smith, you discuss treatment options. Mr Smith chooses to have a full clearance and immediate maxillary and mandibular dentures made.







191. What is the most significant advantage of immediate denture provision for Mr Smith?

A. Improvement of aesthetics
B. Restoration of function
C. Prevention of bone resorption
D. Reduced number of appointments
E. Improved patient comfort

192. You decide to take the primary impressions using alginate impression material. On your first attempt to take the impression, the material sets too quickly and you will need to re-take the impression.

Which of the following is the most appropriate method for prolonging the setting time of an alginate impression without adversely affecting its physical qualities?

A. Increasing the amount of water to powder
B. Incorporation of more alginate powder into the mix
C. Reducing the speed of spatulation when mixing the material
D. Decreasing the water temperature

193. You determined that Mr Smith currently has a reduced vertical dimension of occlusion (VDO) and that this will need to be corrected when constructing the new dentures.

What is the most effective technique to record the re-established VDO?

A. Use multiple methods to verify his VDO
B. Reduce his vertical dimension at rest by 1mm
C. Ensure that his freeway space is higher than his inter-occlusal distance
D. Ask him to say "M" with lips relaxed and measure the height of the lower third of his face as the VDO

194. The occlusal registration stage is an important step that records the information required to produce the waxed-up dentures for the try-in visit.

What step should be sequenced first in the occlusal registration visit?

A. Register the maxilla-mandibular relationship
B. Select artificial teeth
C. Establish the occlusal plane of the maxillary wax rim
D. Determine the desired vertical dimension of occlusion

195. You are about to extract the maxillary teeth to insert the maxillary immediate denture.

Which local anaesthetic is most efficacious for removal of maxillary teeth in this case?

A. Lignocaine
B. Articaine
C. Mepivacaine
D. Prilocaine

Clinical scenario 40

Question 196 through to 200 refer to the following information

Ms Jane Raith is a female aged 75, who presents to your office requesting you make her a new complete maxillary denture. She has had her current denture for 17 years.

Her chief presenting complaints are:

1. Her jaw clicks when she is chewing.
2. The corners of her mouth are always reddened and occasionally painful.
3. The denture does not feel secure when chewing.

Your examination reveals:

1. Only teeth 33–43 are present in the mandibular arch, however they are sound with minimal periodontal disease.
2. The anterior denture teeth show signs of heavy wear.
3. The maxillary alveolar ridge is firm, except in the anterior region where it is soft, flabby and inflamed.
4. There is evidence of angular cheilitis.

196. What is the most likely cause of the angular cheilitis?

A. Reduced freeway space
B. Poor denture hygiene
C. Reduced vertical dimension of occlusion
D. A habitual protrusive chewing position
E. Denture movement when chewing

197. The clicking sound within the temporomandibular joint (TMJ) during mastication is due to the meniscus being pulled over the articular eminence.

Which muscle group is most likely associated with Ms Raith's complaint of clicking sound with her TMJ?

A. Masseter
B. Buccinator
C. Temporalis
D. Lateral pterygoid
E. Medial pterygoid

198. What is the primary cause of the current denture's instability?

A. Loss of posterior seal
B. Anterior maxillary bone loss
C. Uneven tooth wear
D. Incorrect centric relation

199. You plan to take a set of secondary impressions.

Which of the following impression techniques is most appropriate for Ms Raith's new complete maxillary denture?

A. Alginate in a compound-modified stock tray
B. Zinc oxide and eugenol in the compound-modified existing denture
C. Polyvinylsiloxane in a custom tray
D. Polyvinylsiloxane in a compound-modified custom tray

200. Which of the following will improve the stability of the new complete maxillary denture?

A. Relieving the central palatal area of the denture
B. Making a functional partial lower denture
C. Selecting denture teeth with improved wear resistance
D. Ensuring the occlusion allows for group function in lateral movements
E. Ensure presence of post-dam seal in the new denture

EXAM KEYS

Sequence Number	Correct Answer	Scope
1	B	GD
2	C	GD
3	B	GD
4	C	GD
5	A	GD
6	D	GD
7	B	GD
8	A	GD
9	B	GD
10	C	GD
11	D	GD
12	D	GD
13	A	GD
14	B	GD
15	A	GD
16	A	GD
17	B	GD
18	A	GD
19	C	GD
20	A	GD
21	E	GD
22	D	GD
23	B	GD
24	E	GD
25	E	GD

Sequence Number	Correct Answer	Scope
26	E	GD
27	B	GD
28	E	GD
29	D	GD
30	E	GD
31	D	GD
32	D	GD
33	B	GD
34	D	GD
35	B	GD
36	B	GD
37	D	GD
38	B	GD
39	D	GD
40	E	GD
41	D	GD
42	B	GD
43	A	GD
44	E	GD
45	D	GD
46	E	GD
47	C	GD
48	A	GD
49	D	GD
50	E	GD

Sequence Number	Correct Answer	Scope
51	B	GD
52	E	GD
53	C	GD
54	B	GD
55	A	GD
56	D	GD
57	C	GD
58	C	GD
59	B	GD
60	E	GD
61	A	GD
62	C	GD
63	B	GD
64	B	GD
65	A	GD
66	D	GD
67	A	GD
68	C	GD
69	D	GD
70	E	GD
71	D	GD
72	B	GD
73	C	GD
74	C	GD
75	C	GD

Sequence Number	Correct Answer	Scope
76	B	GD
77	D	GD
78	D	GD
79	B	GD
80	B	GD
81	A	GD
82	A	GD
83	A	GD
84	D	GD
85	C	GD
86	B	GD
87	C	GD
88	C	GD
89	E	GD
90	C	GD
91	E	GD
92	A	GD
93	B	GD
94	D	GD
95	B	GD
96	A	GD
97	C	GD
98	C	GD
99	E	GD
100	A	GD

Sequence Number	Correct Answer	Scope
101	E	GD
102	E	GD
103	C	GD
104	A	GD
105	B	GD
106	A	GD
107	E	GD
108	D	GD
109	D	GD
110	B	GD
111	E	GD
112	A	GD
113	D	GD
114	A	GD
115	A	GD
116	E	GD
117	C	GD
118	B	GD
119	A	GD
120	C	GD
121	A	GD
122	B	GD
123	E	GD
124	D	GD
125	B	GD

Sequence Number	Correct Answer	Scope
126	E	GD
127	E	GD
128	E	GD
129	C	GD
130	C	GD
131	C	GD
132	D	GD
133	C	GD
134	B	GD
135	C	GD DH DHDT
136	A	GD DH DHDT
137	C	GD DH DHDT
138	D	GD DH DHDT
139	E	GD DH DHDT
140	B	GD DH DHDT
141	C	GD DH DHDT
142	A	GD DH DHDT
143	E	GD DH DHDT
144	D	GD DH DHDT
145	B	GD DH DHDT
146	C	GD DH DHDT
147	A	GD DH DHDT
148	B	GD DH DHDT
149	B	GD DH DHDT
150	C	GD DH DHDT

Sequence Number	Correct Answer	Scope
151	D	GD DH DHDT
152	A	GD DH DHDT
153	D	GD DH DHDT
154	B	GD DH DHDT
155	A	GD DH DHDT
156	C	GD DT DHDT
157	C	GD DT DHDT
158	E	GD DT DHDT
159	C	GD DT DHDT
160	B	GD DT DHDT
161	C	GD DT DHDT
162	A	GD DT DHDT
163	B	GD DT DHDT
164	E	GD DT DHDT
165	B	GD DT DHDT
166	D	GD DT DHDT
167	C	GD DT DHDT
168	A	GD DT DHDT
169	D	GD DT DHDT
170	E	GD DT DHDT
171	E	GD DT DHDT
172	A	GD DT DHDT
173	C	GD DT DHDT
174	D	GD DT DHDT
175	B	GD DT DHDT

Sequence Number	Correct Answer	Scope
176	E	GD DT DHDT
177	B	GD DT DHDT
178	E	GD DT DHDT
179	D	GD DT DHDT
180	A	GD DT DHDT
181	E	GD DT DHDT
182	B	GD DT DHDT
183	A	GD DT DHDT
184	D	GD DT DHDT
185	C	GD DT DHDT
186	A	GD DT DHDT
187	C	GD DT DHDT
188	D	GD DT DHDT
189	B	GD DT DHDT
190	B	GD DT DHDT
191	A	GD DP
192	D	GD DP
193	A	GD DP
194	C	GD DP
195	B	GD DP
196	C	GD DP
197	D	GD DP
198	B	GD DP
199	D	GD DP
200	B	GD DP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