



2019 COMSSAT Questions and Answers

1. Shortly after the onset of angina, a patient begins to exhibit dyspnea. This is highly suggestive of:
- (A) acute right heart failure with pulmonary hypertension.
 - (B) a right to left shunt with decreased arterial blood oxygenation.
 - (C) myocardial ischemia with acute left ventricular failure.
 - (D) right ventricular infarct.

Key:C

Domain: Medical Assessment and Management of the Surgical Patient

2. A 65 year-old male is referred for removal of multiple carious teeth. He requests the procedure be done under general anesthesia. During his pre-operative history, he states that for the past 2 years he has had increasing difficulty breathing at night and now sleeps on two pillows. He also states that he has an occasional "fluttering" sensation in his chest. Cardiac auscultation reveals an accentuated first heart sound with a snap. Which of the following would you suspect to be present in this patient?
- (A) Mitral stenosis
 - (B) Aortic stenosis
 - (C) Aortic regurgitation
 - (D) Tricuspid stenosis

Key:A

Domain: Medical Assessment and Management of the Surgical Patient

3. A 68 year-old female states that she was diagnosed with emphysema 10 years ago. Which of the following would you expect to find during a pre-operative pulmonary work-up on this patient?
- (A) Inspiratory obstruction
 - (B) Increased static elastic recoil
 - (C) Lung hyperinflation
 - (D) Increased diffusing capacity

Key:C

Domain: Medical Assessment and Management of the Surgical Patient

4. Restrictive lung disease is characterized by:
- (A) obstructive airways.
 - (B) increased elastic recoil.
 - (C) low expiratory flow rates.
 - (D) a normal Vital Capacity (VC).

Key:C

Domain: Medical Assessment and Management of the Surgical Patient



5. Gingko Biloba, used to enhance memory, has what potential complication?
- (A) Renal failure
 - (B) Stroke
 - (C) Clotting disorders
 - (D) Elevated LFTs

Key:C

Domain: Medical Assessment and Management of the Surgical Patient

6. Of the following patients, which is most likely to be a carrier of MRSA?
- (A) An HIV positive 24 year-old male
 - (B) A 30 year-old Type II diabetic
 - (C) A sexually active 35 year-old with multiple partners
 - (D) A 81 year-old nursing home resident

Key:D

Domain: Medical Assessment and Management of the Surgical Patient

7. Patients taking prednisone and/or methotrexate along with a bisphosphonate:
- (A) are less likely to develop osteonecrosis.
 - (B) has no effect on the development of osteonecrosis.
 - (C) are more likely to develop osteonecrosis sooner.
 - (D) prednisone and methotrexate help to prevent osteonecrosis.

Key:C

Domain: Medical Assessment and Management of the Surgical Patient

8. When thinking about prevention of perioperative complications related to Sickle Cell Disease, which of the following are recommended?
- (A) Avoidance of preoperative and intraoperative hypoxemia
 - (B) Liberal use of narcotic analgesics to prevent bone pain
 - (C) Aggressive hydration both preoperatively and postoperatively to decrease blood viscosity
 - (D) Avoidance of acidosis with the use of sodium bicarbonate or other alkalization techniques

Key:A

Domain: Medical Assessment and Management of the Surgical Patient



9. A 20 year-old female complains of a nontender lump in her neck above the clavicle that has been present for a year. She states that has increased and decreased in size over that time. More recently she has been experiencing generalized itching which has been escalating with time. The most likely diagnosis would be:
- (A) Hodgkin's disease.
 - (B) neurofibromatosis.
 - (C) sarcoidosis.
 - (D) Addison's disease.

Key:A

Domain: Medical Assessment and Management of the Surgical Patient

10. Minor bleeding from routine dental extraction in known Von Willebrand's patients is best managed with:
- (A) protamine.
 - (B) DDAVP.
 - (C) primary closure.
 - (D) platelet transfusion and fibrin sealant.

Key:B

Domain: Medical Assessment and Management of the Surgical Patient

11. A 36 year-old female (ASA 1) loses consciousness prior to IV deep sedation. She is breathing, has a pulse rate of 84, and blood pressure of 63/34. Which of the following is appropriate treatment?
- (A) Atropine 2.0 mg IV
 - (B) Ephedrine 10 mg IV
 - (C) Epinephrine 0.1 mg IV q. 3–5 min
 - (D) Nalaxone 0.4 mg IV

Key:B

Domain: Anesthesia and Pain Control

12. Which of the following is correct regarding the use of naloxone for suspected opioid induced respiratory depression?
- (A) The appropriate dose is 0.1- 0.4 mg IV q. 3-5 min
 - (B) It should be titrated in 1 mg increments IV q. 3-5 min until respiratory depression is reversed
 - (C) The maximum recommended dose is 1.6 mg IV
 - (D) It should never be administered to a patient with a current history of opioid dependence

Key:A

Domain: Anesthesia and Pain Control

13. On a patient with known asthma, the use of fentanyl for sedation may produce:
- (A) direct bronchoconstriction.
 - (B) reflex bronchoconstriction.
 - (C) release of vasoactive substances from mast cells.

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- (D) ventilatory depressant effects.

Key:D

Domain: Anesthesia and Pain Control

14. A submental intubation can be easily accomplished when a patient has been intubated with a:

- (A) nasal RAE tube.
- (B) wire-reinforced oral tube.
- (C) LMA.
- (D) standard oral endotracheal tube.

Key:B

Domain: Anesthesia and Pain Control

15. Which benzodiazepine has active metabolites that have clinical impact?

- (A) Triazolam (Halcion)
- (B) Midazolam (Versed)
- (C) Diazepam (Valium)
- (D) Oxazepam (Serax)

Key:C

Domain: Anesthesia and Pain Control and Pain Control

16. Oral midazolam in children:

- (A) has a narrow toxic-therapeutic ratio.
- (B) has a long onset of action.
- (C) has a recommended dose of 0.5 mg/kg.
- (D) is not recommended to be mixed in different carrying vehicles (juice, cola, and syrup) to alleviate unpalatable taste.

Key:C

Domain: Anesthesia and Pain Control



17. Which medication given concomitantly would most effectively diminish the likelihood of ketamine emergence phenomena?

- (A) Fentanyl
- (B) Midazolam
- (C) Atropine
- (D) Esmolol

Key:B

Domain: Anesthesia and Pain Control

18. Propofol:

- (A) is a sedative-hypnotic anesthetic agent.
- (B) increases intracranial pressure.
- (C) increases systemic vascular resistance.
- (D) is a barbiturate anesthetic agent.

Key:A

Domain: Anesthesia and Pain Control

19. The use of intramuscular ketamine:

- (A) can cause significant pain on injection.
- (B) has a smooth but slow onset.
- (C) does not provide amnesia.
- (D) does have analgesic properties.

Key:D

Domain: Anesthesia and Pain Control

20. During intravenous sedation with propofol a possible complication is an increased risk of:

- (A) tachycardia following sedation.
- (B) hypotension during sedation.
- (C) prolonged sedation.
- (D) neutrophil dysfunction.

Key:B

Domain: Anesthesia and Pain Control and Pain Control

21. Which of the following factors would be most important in deciding to remove a 2 mm fractured root tip of a maxillary molar?

- (A) Close proximity of the root tip to the floor of the maxillary sinus
- (B) Patient's age less than 50
- (C) Operator skill and experience
- (D) Presence of periapical pathology

Key:D

Domain: Dentoalveolar



22. Which of the following conditions is most likely to be associated with an asymptomatic erupted mandibular third molar in a young adult?

- (A) Resorption of the distal root of the adjacent tooth
- (B) Dental caries
- (C) Localized periodontitis
- (D) Dentigerous cysts

Key:C

Domain: Dentoalveolar

23. Which of the following is an indication to perform a sulcular incision instead of a scalloped mucogingival junction incision when performing periapical surgery on a maxillary incisor?

- (A) Presence of a short root
- (B) Preserving anterior gingival esthetics
- (C) Avoidance of releasing incisions
- (D) Eliminate the need for suturing

Key:A

Domain: Dentoalveolar

24. Which of the following factors is associated with a favorable outcome when surgical uprighting second molars?

- (A) Uprighting involving an arc of rotation of greater than 90 degrees
- (B) Incomplete vertical growth of the mandible
- (C) The need to correct the bucco-lingual position of the tooth
- (D) Second molar root formation is 2/3 complete

Key:D

Domain: Dentoalveolar

25. The best technique for performance of a partial odontectomy (coronectomy) is to remove tooth structure:

- (A) to a level approximately 3 mm above the level of the inferior alveolar canal and healing by secondary intention.
- (B) so that the remaining roots are at least 3 mm below the crestal bone followed by healing by secondary intention.
- (C) so that the remaining roots are at least 3 mm below the crestal bone followed by watertight primary closure.
- (D) to a level approximately 3 mm above the level of the inferior alveolar canal followed by watertight primary closure.

Key:C

Domain: Dentoalveolar



26. The best time to provide intravenous preoperative antibiotic therapy prior to removal of impacted third molars associated with pericoronal infection is:
- (A) immediately prior to surgery.
 - (B) 0.5–2 hours prior to surgery.
 - (C) 3–4 hours prior to surgery.
 - (D) 6 hours prior to surgery.

Key: B

Domain: Dentoalveolar

27. The best approach for surgical exposure of an impacted tooth for orthodontic bracketing is:
- (A) complete exposure of the CEJ.
 - (B) partial exposure of the crown and avoiding exposure of the CEJ.
 - (C) complete exposure of the CEJ and 1 mm of surrounding alveolar bone.
 - (D) exposure of the crown until the greatest diameter of the crown is revealed regardless of the CEJ.

Key: B

Domain: Dentoalveolar

28. Which radiographic finding is most highly associated with inferior alveolar nerve exposure during surgical removal of mandibular third molars?
- (A) Darkening of the third molar tooth root
 - (B) Narrowing of the third molar tooth root
 - (C) Deflection of the third molar roots
 - (D) A bifid inferior alveolar canal

Key: A

Domain: Dentoalveolar



29. While attempting to extract impacted tooth #16, the tooth is suddenly displaced and is no longer visible or palpable. The patient now has limited mandibular opening. What is the most likely position of tooth #16?



- (A) In the maxillary sinus
- (B) In the buccal space
- (C) In the body of the zygoma
- (D) In the infratemporal space

Key:D

Domain: Dentoalveolar

30. Patients with a history of oral bisphosphonate usage presenting with asymptomatic exposed bone should:
- (A) have the non-vital bone surgically removed.
 - (B) be observed.
 - (C) start long term intravenous antibiotics.
 - (D) undergo hyperbaric oxygen therapy immediately.

Key:B

Domain: Dentoalveolar

31. A patient provides a history of having recent blunt trauma to the left zygoma. Regarding the clinical condition exhibited:
- (A) recurrent hemorrhage may occur in 0-38% of the cases.
 - (B) there may be decreased intraocular pressure and optic ischemia.
 - (C) topical cycloplegics are contraindicated for this condition.
 - (D) topical steroids may result in scarring of the cornea.

Key:A

Domain: Trauma



32. The child shown in the photograph suffered a dog bite with soft-tissue involvement. Twenty-four hours after primary closure the patient develops a wound infection. Which of the following is the most likely primary cause of the infection?



- (A) *Pasteurella multocida*
- (B) *Streptococcus viridians*
- (C) *Staphylococcus aureus*
- (D) *Eikenella corrodens*

Key:A

Domain: Trauma

33. An avulsive upper lip injury involving approximately one fourth of the transverse length of the lip should be treatment planned for a/an:

- (A) Abbe-Estlander flap.
- (B) Gilles fan flap.
- (C) full-thickness wedge resection and primary closure.
- (D) Karapandzic flap.

Key:C

Domain: Trauma

34. The most specific reliable marker of perfusion in a multiple trauma patient is:

- (A) urine output.
- (B) Doppler blood pressure.
- (C) capillary refill time.
- (D) tachycardia.

Key:A

Domain: Trauma

35. Diffuse axonal injuries are thought to arise from which of the following mechanism?



- (A) Acceleration and deceleration
- (B) Blunt object trauma
- (C) High velocity missile penetration
- (D) Low velocity missile penetration

Key:A

Domain: Trauma

36. Severe ocular pain, decreased vision, increased intraocular pressure and proptosis after facial injury most likely is due to:
- (A) retrobulbar hematoma.
 - (B) fracture of the optic canal.
 - (C) hemorrhage from the maxillary sinus.
 - (D) superior orbital fissure syndrome.

Key:A

Domain: Trauma

37. Traumatic telecanthus is caused by:
- (A) lateral displacement of a zygomatic fracture.
 - (B) orbital rim fracture.
 - (C) orbital roof "blow-in" fracture.
 - (D) medial orbital wall "blow-out" fracture.

Key:D

Domain: Trauma

38. With respect to mandibular fractures, a "favorable" fracture is one in which:
- (A) there are teeth on each side of the fracture.
 - (B) there is no displacement of the fragments.
 - (C) the displacing muscles are countered by the interlocking of fragments.
 - (D) a repeatable occlusion is present without treatment.

Key:C

Domain: Trauma

39. The site of mandibular fracture associated with the highest incidence of complication, whether treated open or closed, is the:
- (A) condylar process.
 - (B) angle.
 - (C) body.
 - (D) symphysis.

Key:B

Domain: Trauma



40. Which of the following is the best image for assessing the orbit for fractures?
- (A) Axial CT
 - (B) Direct Coronal CT
 - (C) 3-D CT Reconstructions
 - (D) MRI

Key:B

Domain: Trauma

41. Distraction osteogenesis consists of an osteotomy followed by distraction:
- (A) in 1-3 days.
 - (B) in 5-7 days.
 - (C) in 10-12 days.
 - (D) after consolidation.

Key:B

Domain: Orthognathic Cleft Craniofacial

42. An 8 year-old patient with unilateral cleft lip and palate has an unrepaired residual oronasal fistula. Your treatment plan may include:
- (A) rotation of incisors prior to grafting.
 - (B) expanding the maxilla.
 - (C) maintaining the primary teeth in the cleft site.
 - (D) using an alloplastic bone substitute in the site.

Key:B

Domain: Orthognathic Cleft Craniofacial

43. The most common speech alteration that might occur as a complication of LeFort I advancement in a repaired cleft palate patient is:
- (A) denasality.
 - (B) frontal distortion.
 - (C) lateral distortion.
 - (D) hypernasality.

Key:D

Domain: Orthognathic Cleft Craniofacial

44. Antibiotics in orthognathic surgical procedures:
- (A) are contraindicated.
 - (B) reduce the incidence of infection.
 - (C) increase the risk of osseous necrosis.
 - (D) are most effective when started 2 days before surgery.

Key:B

Domain: Orthognathic Cleft Craniofacial



45. The simultaneously performed genioplasty and sagittal split osteotomy:
- (A) decreases the risk of inferior alveolar nerve sensory loss.
 - (B) should not be performed simultaneously.
 - (C) increases the risk of inferior alveolar nerve sensory loss.
 - (D) has no effect on the risk of inferior alveolar nerve sensory loss.

Key:C

Domain: Orthognathic Cleft Craniofacial

46. Which of the following is the most stable surgical procedure?

- (A) Maxillary inferior repositioning
- (B) Segmental maxillary expansion
- (C) Maxillary superior repositioning
- (D) Mandibular advancement

Key:C

Domain: Orthognathic Cleft Craniofacial

47. Which class of medication used for restless leg syndrome in the OSA patient has the highest incidence of rebound?

- (A) Benzodiazepines
- (B) Dopamine agonists
- (C) Antiepileptics
- (D) Opioids

Key:B

Domain: Orthognathic Cleft Craniofacial

48. Which procedure offers the “mouth breather” decreased resistance to nasal airflow?

- (A) Segmental LeFort I osteotomy
- (B) Surgically assisted maxillary expansion (SAME)
- (C) Mandibular narrowing
- (D) Mandibular widening

Key:B

Domain: Orthognathic Cleft Craniofacial

49. Relapse associated with mandibular distraction osteogenesis is reduced by simultaneous expansion of:

- (A) muscles.
- (B) ligaments.
- (C) tendons.
- (D) cartilage.

Key:A

Domain: Orthognathic Cleft Craniofacial



50. Mandibular distraction has become a reliable procedure in the management of the following craniofacial deformities?

- (A) Hemifacial microsomia
- (B) Crouzon's Disease
- (C) Apert's Disease
- (D) Craniosynostosis

Key:A

Domain: Orthognathic Cleft Craniofacial

51. Which of the following is a major mechanism for nasal tip support?

- (A) Size and shape of nasal bones
- (B) Medial crural feet attachment to the nasal septum
- (C) Anterior nasal spine
- (D) Soft tissue thickness of the ala

Key:B

Domain: Cosmetic

52. This open roof nasal deformity is best corrected by:



- (A) nasal septoplasty.
- (B) shield graft placement.
- (C) lateral nasal osteotomies.
- (D) shaving upper lateral cartilages.

Key:C

Domain: Cosmetic



53. Cephalic trimming of the lower lateral cartilages of the nose during rhinoplasty has which of the following effects on the nasal tip?
- (A) Upward rotation
 - (B) Downward rotation
 - (C) Widening
 - (D) No effect

Key:A

Domain: Cosmetic

54. Bilateral brisk bleeding 48 hours following septorhinoplasty is uncontrollable with anterior nasal packs. What is the next most appropriate step to control the bleeding?
- (A) Attempt electrocautery for hemostasis
 - (B) Schedule surgical exploration and vessel ligation
 - (C) Place anterior and posterior nasal packs
 - (D) Provide external nasal pressure and Afrin nasal spray

Key:C

Domain: Cosmetic

55. Which of the following rhinoplasty procedures would lend itself to concomitant treatment with a Le Fort I advancement?
- (A) Dorsal augmentation
 - (B) Nasal tip rotation
 - (C) Nasal tip narrowing
 - (D) Decreasing nasal projection

Key:A

Domain: Cosmetic

56. The etiology of fullness in the lateral aspect of the upper eyelid is:
- (A) orbital septum weakness and prolapse of the lacrimal gland.
 - (B) orbicularis oculi laxity and herniation of temporal fat.
 - (C) disinsertion of the levator palpebrae aponeurosis.
 - (D) injury to CN III with Mueller's muscle paresis.

Key:A

Domain: Cosmetic



57. The most important factor determining the stability of counterclockwise occlusal plane rotations in bimaxillary orthognathic surgery is:
- (A) preoperative removal of orthodontic compensations.
 - (B) favorable alteration of the posterior facial height.
 - (C) modest changes to the anterior facial height.
 - (D) minimizing muscle dissection in the mandible.

Key:B

Domain: Cosmetic

58. Which of the following is true regarding the 2 layer SMAS (superficial musculoaponeurotic system) technique?
- (A) Skoog popularized the procedure of undermining the superficial fascia and skin as a unit.
 - (B) The ability to adjust both vectors and the differential movement of skin and fat elevation allows greater artistic precision.
 - (C) This procedure is synonymous with the composite procedure described by Hamra.
 - (D) This technique releases the superficial fascia from the retaining ligaments while retaining its blood supply.

Key:B

Domain: Cosmetic

59. Which of the following statements regarding the use of botulinum toxin for facial rejuvenation is true?
- (A) The potency of Botox may be increased by aminoquinolones.
 - (B) The toxin crosses the blood-brain barrier.
 - (C) Following reconstitution, Botox must be used within 12 hours.
 - (D) The use of injected local anesthetic in conjunction with Botox injections is contraindicated.

Key:D

Domain: Cosmetic

60. Which of the following statements regarding the use of dermabrasion is correct?
- (A) Dermabrasion is effective for the treatment of ice-pick scars.
 - (B) Scars that improve with manual stretching respond in greater than 50% of cases with a single dermabrasion procedure.
 - (C) Repeat dermabrasion should ideally be done within the first 6 weeks following the previous treatment.
 - (D) It is preferable to perform a rhytidectomy prior to a dermabrasion in a staged treatment plan.

Key:B

Domain: Cosmetic



61. Intra-articular hydraulic manipulation of the temporomandibular joint is indicated for patients with:
- (A) internal derangement.
 - (B) disc perforation.
 - (C) fibrous ankylosis.
 - (D) chronic subluxation.

Key:A

Domain: Temporomandibular Disorders Facial Pain

62. A 40 year-old female presents with 18 month history of right preauricular pain, opening click at approximately 20 mm of opening, slight deviation of the mandible to the right with maximal interincisal opening of 32 mm. Success of arthroscopic surgery in this setting is:
- (A) 35-45%.
 - (B) 55-65%.
 - (C) 75-85%.
 - (D) 95%-100%.

Key:C

Domain: Temporomandibular Disorders Facial Pain

63. Pharmacological management of chronic myofascial pain dysfunction involving the facial musculature could include:
- (A) 30 mg of amitriptyline every evening.
 - (B) 50 mg of dopamine twice daily.
 - (C) 30 mg of carbamazepine every evening.
 - (D) 50 mg of gabapentin twice daily.

Key:A

Domain: Temporomandibular Disorders Facial Pain

64. The most important principle in total TMJ alloplastic reconstruction is:
- (A) three weeks of mandibular immobilization to prevent micromotion.
 - (B) removing the coronoid process for improved range of motion.
 - (C) maintaining occlusal relationships.
 - (D) primary stability of the device to the native bone.

Key:D

Domain: Temporomandibular Disorders Facial Pain

65. Which of the following is accurate pertaining to the use of a customized alloplastic total temporomandibular joint in a patient with a failed proplast teflon implant?
- (A) Contraindicated due to foreign body giant cell reactions
 - (B) Provides best option for anatomic reconstruction
 - (C) Not predictive for long-term functional stability
 - (D) Predictable in relieving pain and restoring function

Key:B

Domain: Temporomandibular Disorders Facial Pain



66. Lasting reduction in temporomandibular disc displacement:
- (A) has not been convincingly demonstrated long-term.
 - (B) is benefitted significantly by lower joint space lavage.
 - (C) depends significantly on altering synovial viscosity.
 - (D) varies in accord with the degree of osteoarthritis.

Key:A

Domain: Temporomandibular Disorders Facial Pain

67. The most common long-term complication of discectomy for the treatment of TMJ internal derangement is:
- (A) ankylosis.
 - (B) facial nerve injury.
 - (C) condylar remodeling.
 - (D) chronic pain.

Key:C

Domain: Temporomandibular Disorders Facial Pain

68. Internal derangement of the TMJ which presents as a chronic closed lock is most effectively managed by what surgical procedure?
- (A) Arthrocentesis
 - (B) Arthroscopic lysis and lavage
 - (C) Arthrotomy with disc repositioning
 - (D) Discectomy and disc replacement with cartilage

Key:B

Domain: Temporomandibular Disorders Facial Pain

69. The major advantage of the modified condylotomy procedure over open arthrotomy in treating internal derangements of the TMJ is that:
- (A) the condylotomy procedure is more likely to reduce the disc.
 - (B) the condylotomy procedure is performed outside the capsule.
 - (C) open arthrotomy procedures require more frequent re-operation.
 - (D) the modified condylotomy produces a more rapid return to normal function.

Key:B

Domain: Temporomandibular Disorders Facial Pain



70. An 18 year-old patient presents with the development of a sudden, severe limitation of opening to only 18 mm. If medications and bite splint therapy fail to alleviate the symptoms the next step to consider is:
- (A) arthrocentesis.
 - (B) open arthrotomy.
 - (C) alloplastic joint replacement.
 - (D) physical therapy.

Key:A

Domain: Temporomandibular Disorders Facial Pain

71. Desquamative gingivitis is frequently associated with:
- (A) ulcerative squamous cell carcinoma.
 - (B) plaque induced acute gingivitis.
 - (C) lichen planus.
 - (D) herpetiform infections.

Key:C

Domain: Pathology

72. Ehlers-Danlos syndrome is caused by a defect of which of the following?
- (A) Keratin
 - (B) Collagen
 - (C) Elastin
 - (D) Laminin

Key:B

Domain: Pathology

73. Erosive lichen planus is best diagnosed by:
- (A) brush biopsy.
 - (B) immunofluorescence of biopsy specimen.
 - (C) biopsy of active ulcer.
 - (D) biopsy of non-ulcerated area.

Key:D

Domain: Pathology



74. A 50 year-old patient presents with a one week onset of increasingly painful vesicles of the oral and nasal mucosa. The patient is febrile and cannot tolerate oral intake. Immunohistochemistry reveals autoantibodies against epithelial intercellular bridge substances. An appropriate initial treatment would be:
- (A) intravenous prednisone.
 - (B) intravenous gamma globulin.
 - (C) rituximab (Rituxan).
 - (D) plasmapheresis.

Key:A

Domain: Pathology

75. Which is true regarding the use of a buccal fat pad graft for the closure of an oral-antral fistula?
- (A) Graft survival depends upon primary mucosal coverage.
 - (B) Success is predictable in the presence of chronic sinusitis.
 - (C) It is a pedicled graft with an axial vascular pattern.
 - (D) This technique results in loss of vestibular depth.

Key:C

Domain: Pathology

76. A 40 year-old African American female presents for evaluation of mixed radiolucent/radiopaque, round, non-corticated lesions involving the apices of the anterior mandibular teeth. The patient is asymptomatic. All of the mandibular anterior teeth test vital. Which of the following would be the recommended management?
- (A) Obtain a CT scan to further evaluate the extent of the lesion
 - (B) Obtain a tissue biopsy to confirm the diagnosis
 - (C) No treatment is necessary
 - (D) Perform curettage of the lesions and send tissue for pathologic diagnosis

Key:C

Domain: Pathology

77. Which of the following represents the most appropriate surgical management of an adenomatoid odontogenic tumor?
- (A) En-bloc resection with delayed reconstruction
 - (B) A two-stage surgery: decompression followed by enucleation
 - (C) Enucleation and curettage
 - (D) En-bloc resection and excision of surrounding involved soft tissue

Key:C

Domain: Pathology



78. Information that may guide the decision for elective neck dissection in patients with T1 and T2 oral cavity squamous cell carcinoma includes which of the following?
- (A) Degree of differentiation
 - (B) Margin status at the time of diagnostic biopsy
 - (C) Length of time that the cancer has been present
 - (D) Tumor depth of invasion

Key:D

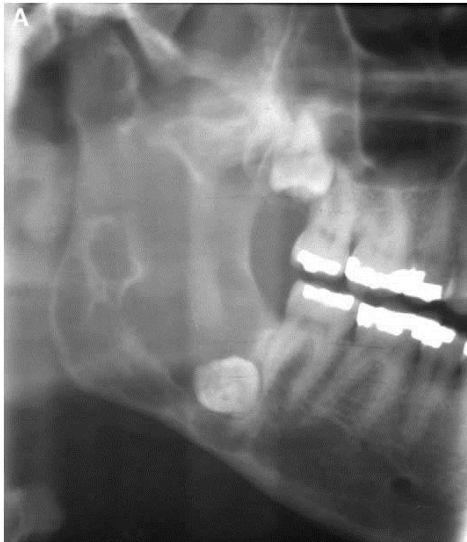
Domain: Pathology

79. A metastatic tumor of the mandible in a 70 year-old man is most likely to originate in which of the following anatomic sites?
- (A) Colon
 - (B) Kidney
 - (C) Lung
 - (D) Breast

Key:C

Domain: Pathology

80. A 32 year-old patient presents with the following radiographic findings on a panorex film. Aspirations yield a creamy thick fluid while the biopsy shows a thin walled cystic structure with corrugated lining. This is most consistent with:



- (A) dentigerous cyst.
- (B) odontogenic keratocyst.
- (C) ameloblastoma.
- (D) myxoma.

Key:B

Domain: Pathology

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81. The morbidity associated with the lateral approach to the anterior ilium is due to reflection of which muscle?

- (A) Iliacus
- (B) Gluteus medius
- (C) Sartorius
- (D) Tensor fascia lata

Key:D

Domain: Reconstruction

82. Which of the following is the most important determinant in survival of a local random pattern skin flap of the face?

- (A) Width of the flap base
- (B) Length of the flap
- (C) Perfusion pressure of nutrient vessels to the flap
- (D) Amount of reactive oxygen intermediates

Key:C

Domain: Reconstruction

83. The Abbé-Estlander flap is supplied by which of the following arteries?

- (A) Labial
- (B) Transverse facial
- (C) Angular
- (D) Infraorbital

Key:A

Domain: Reconstruction

84. The best reconstruction for a patient with an oral cancer that requires a hemimandibulectomy and wide resection of soft tissue with planned post-operative radiation therapy is a:

- (A) reconstruction plate.
- (B) reconstruction plate with secondary reconstruction with nonvascularized bone graft.
- (C) microvascular fibular flap with a soft tissue skin paddle.
- (D) reconstruction plate with a pectoralis major flap.

Key:C

Domain: Reconstruction

85. In deciding when to place a nonvascularized bone graft to reconstruct the mandible, which of the following is correct?

- (A) Size of the defect is not a factor in success
- (B) Planned radiation therapy after grafting will not affect the outcome
- (C) Defects >9 cm have a high rate of failure
- (D) Defects <5 cm never need grafting

Key:C

Domain: Reconstruction

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86. When placing implants into a fibular flap with soft tissue paddle, the surgeon should consider:
- (A) thinning the soft tissue paddle.
 - (B) reducing the excessive bone height of the fibular.
 - (C) placing fat grafts to bulk up the soft tissues.
 - (D) electively tying the vascular pedicle.

Key:A

Domain: Reconstruction

87. Which one of the following statements is correct regarding the diagnosis, evaluation and autogenous grafting of maxillary defects for rehabilitation with dental implants?
- (A) Harvesting of the autogenous graft should be performed before the exposure of the recipient site
 - (B) Intraoral ramus grafts are associated with more resorption when compared with iliac crest grafts
 - (C) The decision to perform bone grafting should be driven by the requirements of the prosthesis
 - (D) Bone quality is the main determinant factor when selecting extraoral vs intraoral donor sites

Key:C

Domain: Reconstruction

88. In reconstructing a mandibular defect using rh-BMP, one must depend on the chemical process of:
- (A) osteocompetence.
 - (B) osteoconduction.
 - (C) osteogenesis.
 - (D) osteoinduction.

Key:D

Domain: Reconstruction

89. A superiorly based platysma flap receives its dominant blood supply from which of the following vessels?
- (A) Occipital artery
 - (B) Submental branch of the facial artery
 - (C) Transverse cervical artery
 - (D) Superior thyroid artery

Key:B

Domain: Reconstruction



90. A 3 cm defect is left after removing a lesion of the lower lip. This type of defect is best managed by using a/an:
- (A) direct primary three layer closure.
 - (B) Abbe-Estlander flap.
 - (C) anteriorly-based tongue flap.
 - (D) radial forearm free flap.

Key:B

Domain: Reconstruction

91. While placing a threaded endosseous implant, there is 6 mm of the threaded buccal surface exposed. The most appropriate treatment is to:
- (A) place a shorter implant.
 - (B) graft the exposed threads of the implant with autogenous bone.
 - (C) cover the exposed threads of the implant with a collagen membrane.
 - (D) close the incision via a periosteal releasing incision.

Key:B

Domain: Implants

92. When treatment planning the zygomatic (Zygomaticus) implant, which of the following requirements must be met?
- (A) Posterior wall of the maxillary sinus must be at least 4 mm thick
 - (B) Ability to place two anterior maxillary conventional implants
 - (C) Minimum of 10 mm of thickness of the body of the zygoma
 - (D) Minimum of 42 mm between the two zygomatic implants

Key:B

Domain: Implants

93. Which adjunctive implant surgical technique would optimally address a 15 mm vertical deficiency of bony and soft tissues in the anterior maxillary alveolus?
- (A) Insertion of hydroxylapatite blocks using a tunneling technique
 - (B) Distraction osteogenesis
 - (C) Onlay bone grafting
 - (D) Subepithelial grafting

Key:B

Domain: Implants

94. Connective tissue grafts are less predictable if performed at the time of:
- (A) extraction.
 - (B) cortico-cancellous grafting.
 - (C) implant placement.
 - (D) implant uncovering.

Key:B

Domain: Implants

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95. When performing a ridge splitting technique to expand the edentulous ridge for insertion of an interpositional bone graft prior to implant placement, what is the preferred preoperative minimum ridge width?
- (A) 1 mm
 - (B) 2 mm
 - (C) 3 mm
 - (D) 4 mm

Key:C

Domain: Implants

96. For a subantral osseous augmentation, non-resorbable HA can be added to autogenous bone in order to:
- (A) add bulk to the graft.
 - (B) improve initial implant stability.
 - (C) decrease infection rate.
 - (D) improve osteogenesis.

Key:A

Domain: Implants

97. Following anterior tooth removal, how long does it take to get 3-4 mm of both buccal-lingual and apico-coronal ridge resorbtion?
- (A) 1 month
 - (B) 3 months
 - (C) 6 months
 - (D) 1 year

Key:C

Domain: Implants

98. In harvesting subepithelial connective tissue grafts, the advantage of a dual incision is:
- (A) graft thickness is defined by the second incision.
 - (B) it allows for primary closure.
 - (C) donor site pain is uncommon.
 - (D) a dressing is rarely needed at the donor site.

Key:A

Domain: Implants



99. Antibiotic therapy in dental implant surgery:
- (A) eliminates postoperative infection.
 - (B) decreases incidence of early peri-implantitis.
 - (C) reduces integration time of implants.
 - (D) decreases the failure rate of implants.

Key:D

Domain: Implants

100. Which of the following is most important for implant health over time?
- (A) Adequate volume of good quality soft tissue
 - (B) Osseointegration
 - (C) Adequate inter-occlusal space
 - (D) Adequate bone graft consolidation

Key:B

Domain: Implants



Medical Assessment and Management of the Surgical Patient

- Hines, R.L. & Marschall, K.E. (Eds.). (5th ed.).(2008). *Stoelting's anesthesia and co-existing disease: Ischemic heart disease*. Philadelphia, PA: Churchill Livingstone.
- DeTurk, E. & Cahalin, L.P. (2004). *Cardiovascular and pulmonary physical therapy: An evidenced-based approach* (pp. 136-137). McGraw-Hill.
- Braunwald, E., Fauci, A., et al. (15th ed.). (2001). Harrison's principles of internal medicine (pp. 726, 1343-1345, 1493, 1448-49).
- Marx, Cillo, & Ulloa (2007). Oral bisphosphonate-induced osteonecrosis: Risk factors, prediction of risk using serum CTX testing, prevention, and treatment. *Journal of oral and maxillofacial surgery*.
- Firth, P.G. (2005). Anesthesia for precucular cells – a century of sickle cell disease. *British journal of anesthesia*, 95 (3), 287-299.
- Barclay, L. & Vega, C. (2008). Guidelines issued for diagnosis and management of Von Willebrand's disease. *Medscape Medical News*.

Anesthesia and Pain Control

- Becker, et. al. (2007). Management of complications during moderate and deep sedation: Respiratory and cardiovascular complications. *Anesthesia progress*, 54 (2), 59-69.
- Stoelting, R. Asthma. *Anesthesia and co-existing disease*. (Chapter 14).
- Chandu, A., Witherow, H., & Stewart, A. (2008). Submental intubation in orthognathic surgery: initial experience. *British journal of oral and maxillofacial surgery*, 46, 561-563.
- Hamed, H.H. et al. (2008). Submental intubation versus tracheostomy in maxillofacial trauma patients. *Journal of oral and maxillofacial surgery*, 66, 1404-1409.
- Malamed, S. (3rd ed.). (1995). *Sedation: A guide to patient management*, (pp. 120). St. Louis, MO: Mosby.
- Loeffler, P. (1992). Oral benzodiazepines and conscious sedation: a review. *Journal of oral and maxillofacial surgery*, 50, 991.
- (1992). *Clinics of oral and maxillofacial surgery*, (pp. 837-844).
- Bergman, S. (1999). Review of its pharmacology and its use in pediatric anesthesia. *Anesthesia progress*, 46, 10-20.
- Holm, S.W., Cunningham, L.L., Bensadoun, E. & Madsen, M.J. (2006). Hypertension: Classification, pathophysiology, and management during outpatient sedation and local anesthesia. *Journal of oral and maxillofacial surgery*, 64, 111-121.

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February 2019



- Cillo, J.E. & Finn, R. (2006). Hemodynamics in elderly coronary artery disease patients undergoing propofol sedation. *Journal of oral and maxillofacial surgery*, 64 (9), 1338-1342.
- Huettemann, E. et. al. (2006). Effects of propofol vs methohexital on neutrophil function and immune status in critically ill patients. *Journal of anesthesia*, 20(2), 86-91.
- Yorozu, T., et. al. (2007). Factors influencing intraoperative bradycardia in adult patients. *Journal of anesthesia*.

Dentoalveolar

- Berman, S.A. (1992). *Basic principles of dentoalveolar surgery in principles of oral and maxillofacial surgery*. L.J. Peterson, A.T. Indresano, R.D. Marciani, S.M. Roser (Eds.). (pp. 94) Lippincott, PA.
- Fonseca, et.al. (2000). *Oral and maxillofacial surgery: Anesthesia/dentoalveolar surgery/office management* (p.p. 432). Philadelphia, PA: WB Saunders Company.
- Marciani, R. & White, R.P. (1996). Establishing disease and clinical outcomes in asymptomatic third molars. *Oral and maxillofacial surgery knowledge update*, vol. 4, pp. 7,12.
- Marciani, R. (2007). Third molar removal: An overview of indications, imaging, evaluation, and assessment of risk. *Oral and maxillofacial surgery clinics of north America*, 19 (1), 1-3.
- Fonseca, et.al. (2000). *Oral and maxillofacial surgery: Anesthesia/dentoalveolar surgery/office management* (pp. 308-316, 318-319, 426-427). Philadelphia, PA: WB Saunders Company.
- Peterson, L.J., Ellis, E., Hupp, J.R. & Tucker, M.R. (1998). *Contemporary oral and maxillofacial surgery*, (4th ed.), (pp. 385-394). St. Louis, MO: Mosby.
- Miloro, M. et.al. (Eds.). (2004). *Dentoalveolar surgery in peterson's principles of oral and maxillofacial surgery* (pp. 135). (2nd Ed.). BC Decker Inc.
- Pogrel, M.A., Lee, J.S. & Muff, D.F. (2004). Coronectomy: A technique to protect the inferior alveolar nerve. *Journal of oral and maxillofacial surgery*, 62(12), 1447-52.
- Pogrel, M.A. (2007). Partial odontectomy. *Oral and maxillofacial surgery clinics of north America*, 19, 85-91.
- Mehrabi, M., Allen, J.M., Roser, S.M. (2007). Therapeutic agents in perioperative third molar surgical procedures. *Oral and maxillofacial surgery clinics of north America*, 19, 71.
- Woods, R.K. & Dellinger, E.P. (1998). Current guidelines for antibiotic prophylaxis of surgical wounds. *American family physician*, 57(11), 2731-2740.
- Zeitler, D.L. (2004). Management of impacted teeth other than third molars, (pp. 133-134). In Miloro, M. (Ed.), *Oral and maxillofacial surgery*, vol. 1, BC Becker.

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February 2019



- Valmaseda-Castellon, E., Berini-Aytes, L. & Gay-Escoda, C. (2001). Inferior alveolar nerve damage after lower third molar surgical extraction: a prospective study of 1117 surgical extractions. *Oral surgery oral medicine oral pathology oral radiology and endodontology*, 92, 377-383.
- Sedaghafar, M., August, M.A., Dodson, T.B. (2005). Panoramic radiographic findings as predictors of inferior alveolar nerve exposure following third molar extraction. *Journal of oral and maxillofacial surgery*, 63, 3-7.
- Miloro, M., et. al. (Eds.). (2004). *Dentoalveolar surgery in Peterson's principles of oral and maxillofacial surgery* (2nd Ed), (pp. 152). BC Decker Inc.

Trauma

- Walton, W., Von Hagen, S., Grigorian, R. & Zarbin, M. (2003). Management of traumatic hyphema. *Survey of Ophthalmology*, (pp. 242-243).
- Powers, M. (1997). Management of soft tissue injuries. In Fonseca, R. & Walker, R. (Eds.), *Oral and maxillofacial trauma* (vol. 2) (pp. 825). Philadelphia, PA: WB Saunders Co.
- Kristinson, G. (2007). *Pasteurella multocida* infections. *Pediatrics in review* (vol. 28) (pp. 472-473).
- Lee, P. & Mountain, R. (2000). Lip reconstruction. *Current opinion otolaryngology & head and neck*, (vol. 8) (pp. 300-304). Lippincott Williams & Wilkins, Inc.
- Cocchi, M., Kimlin, E. & Walsh, M. et. al. (2007). Identification and resuscitation of the trauma patient in shock. *Emergency medicine clinics of north America*, (vol. 25), (pp. 623-642).
- Klingensmith, M.E., Chen, L.E., Glasgow, S.C. et. al. (Eds). *The Washington manual of surgery* (5th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Fonseca, Marciani & Turvey (2009). *Oral and maxillofacial surgery*, 2 (2), 62.
- Ochs, M.W. & Johns, F.R. (1998). *Evaluation and management of periorbital and ocular injuries*, 2, 45-60.
- Sorel, B. (1998). Open versus closed reduction of mandible fractures. *Oral and maxillofacial surgery clinics of north America*, 10, 541.
- Wether, J.R. (1999). Reconstruction of internal orbital fractures. *Oral and maxillofacial surgery clinics of north America*, 11, 211-223.



Orthognathic/Cleft/Cranciofacial

- Scolozzi, P. Link, II, D. & Schendel, S. (2007). Computer simulation of curvilinear mandibular distraction: accuracy and predictability. *Plastic and reconstructive surgery*, 120 (7), 1975-1980.
- Turvey, T.A., Ruiz, R.L., Costello, B.J. Surgical correction of midface deficiency in cleft lip and palate malformation. *Oral and maxillofacial clinics of north America*, 14 (4), 501.
- Bouloux, G.F. (2003). Complications of orthognathic surgery. *Oral and maxillofacial surgery clinics of north America*, (pp. 229-242).
- Milligan, S.A. & Chesson, A.L. (2002). *Restless legs syndrome in the older adult: diagnosis and management, drugs aging*, 19(10), 741-751.
2004. Treatment of transverse (width) discrepancies in patients who require isolated mandibular surgery: the case for maxillary expansion vs. mandibular narrowing. *Journal of oral and maxillofacial surgery*, 62, 361-368.
- Scolozzi, P., Link, II, D. & Schendel, S. (2007). Computer simulation of curvilinear mandibular distraction: Accuracy and predictability. *Plastic and reconstructive surgery*, 120(7), 1975-1980.

Cosmetic

- Kennedy, B.D. (1992). Indications and techniques of rhinoplasty. *Principles of oral and maxillofacial surgery*. Peterson, L.J. (Eds.). JB Lippincott C.
- Koehler, J. & Waite, P.D. (2004). Basic principles of rhinoplasty. *Principles of oral and maxillofacial surgery*, (2nd ed), (pp. 1350). London: BC Decker Inc.
- Kennedy, B.D. (2000). Cosmetic Rhinoplasty. In Focesca, R., Baker, S., Wolford, L.M. (Eds.), *Oral and maxillofacial surgery*, (vol. 6), (pp. 332). Philadelphia, PA: WB Saunders.
- Epker, B.N. (1990). Cosmetic oral and maxillofacial surgery. *Oral and maxillofacial surgery clinics of north America*, (pp.289-338).
- Fonseca, R.J. (2000). Cosmetic rhinoplasty. In *Oral and maxillofacial surgery*, (vol. 6), (pp. 325). Philadelphia, PA: Saunders.
- Koehler, J. & Waite, P.D. (2004) Basic principles of rhinoplasty. *Principles of oral and maxillofacial surgery*, (2nd ed.), (pp. 1362). London, England: BC Decker Inc.
- Janis, J.E. (2005). Clinical decision-making in rhinoplasty. In F. Nahai (Ed.), *The art of esthetic surgery*, 1, 1971. St. Louis, MO: Quality Medical Publishing.
- Koehler, J. (2009) Basic rhinoplasty. In R.J. Fonseca, *Oral and maxillofacial surgery* (vol. 3) (2nd edition) (pp. 573). St. Louis, MO: Saunders.



- Ghali, G.E. & Sinn, D.P. (1996). Nasal surgery as an adjunct to orthognathic surgery. *Oral and maxillofacial surgery clinics of north America* (vol. 8) (pp. 33-43).
- Waite, P.D. & Matukas, V.J. (1993). Maxillofacial esthetic surgery. *Journal of oral and maxillofacial surgery* (vol. 51) (pp.82).
- Gentile, R.D. (2005). Upper lid blepharoplasty. *Facial plastic surgery clinics of north America* (vol. 113(4)) (pp. 5111-5124).
- Castro, R.D. & Foster, J.A. (1999). Upper lid blepharoplasty. *Facial plastic surgery* (vol.15), (pp.173-181).
- Wolford, L. M., Chemello, P.D. & Hilliard, F.W. (1993). Occlusal plane alteration in orthognathic surgery. *Journal of oral and maxillofacial surgery* (51), (pp. 730-740).
- Epker, B.N. (1993). Discussion (re) occlusal plane alteration in orthognathic surgery. *Journal of oral and maxillofacial surgery*, (51), (pp. 740-741).
- Reyneke, J.P., Bryant, R.S., Suuronen, R. & Becker, P.J. (2006). Postoperative skeletal stability clockwise and counter clockwise rotation of the maxillomandibular complex compared to conventional orthognathic treatment. *British journal of oral and maxillofacial surgery*, (45), (pp. 1)
- Azizzadeh, B., Murphy, M., & Johnson, C. (Eds.). (2007). Master techniques in facial rejuvenation. *Short-flap SMAS rhytidectomy* (pp. 153). Saunders.
- Stuzin, J.M., Baker, T.J. & Gordon, H.L. (1992). The relationship of the superficial and deep facial fascias: relevance to rhytidectomy and aging. *Plastic reconstruction surgery* (89), (pp. 441).
- Faigen, S. & Brandt, F. *Primary and adjunctive use of botulinum toxin type A in facial aesthetic surgery*.
- Orentreich, N. & Orentreich, D. (2001). Dermabrasion. *Clinics of plastic surgery*, (28(1)).

Temporomandibular Disorders / Facial Pain

- Fridrich, K. Et al. (1996). Prospective comparison of arthroscopy and arthrocentesis for temporomandibular disorders. *Journal of oral and maxillofacial surgery* (54), (pp. 816).
- Ogle, O. & Hertz, M. (2000). Myofascial pain. *Oral and maxillofacial surgery clinics* (12(2)), (pp. 217-231).
- Hersh, E. Pharmacological management of TMD (2008). *Oral and maxillofacial surgery clinics*, (20(2)), (pp. 197-210).
- Mercuri, L.G. (2006). Total joint reconstruction—autologous or alloplastic. *Oral and maxillofacial clinics of north America* (18), (pp. 399-410). Philadelphia, PA: Saunders.

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- Mercuri, L.G. & Swift, J.Q. (2009). Consideration for the use of alloplastic temporomandibular joint replacement in the growing patient. *Journal of oral and maxillofacial surgery*, 67(9), (pp. 1979-1990). Elsevier.
- Mercuri, L.G. (2004). Long-term outcomes after total alloplastic temporomandibular joint reconstruction following exposure to failed materials. *Journal of oral and maxillofacial surgery* (62), (pp. 1088-1096).
- Mercuri, L.G. (2009). Temporomandibular joint reconstruction. In Fonseca, Turvey & Marciani *Oral and maxillofacial surgery* (2), (pp. 956-960). Philadelphia, PA: Saunders.
- Brennan, P.A., Vellupillai, H., Madanagopalan, E. & Wilson, A.W. (2006). Arthrocentesis for temporomandibular joint pain dysfunction syndrome, temporomandibular joint arthrocentesis – more questions than answers in clinical controversies in oral and maxillofacial surgery. *Journal of oral and maxillofacial surgery* (64), (pp. 949-955).
- Dimitroulis, G. The role of surgery in the management of disorders of the TMJ: A critical review of the literature Part 2. *International journal of oral and maxillofacial surgery* (34) (pp.231-237).
- McKenna, S. J. (2006) Modified mandibular condylotomy. In T. Indresano, R. Haug *Oral and maxillofacial surgery clinics of north America, modern surgical management of the temporomandibular joint*, 1(3), (pp. 369-381).
- Al-Belasy, F.A. (2007). Arthrocentesis for the treatment of temporomandibular joint closed lock: a review article. *International journal of oral and maxillofacial surgery* (36), (pp. 773-782).

Pathology

- Marx, R.E. (2003). Conditions of development disturbances. In R.E. Marx & D. Stern (Eds.) *Oral and maxillofacial pathology: a rationale for diagnosis and treatment* (pp. 159 ,239-241). Carol Stream, IL: Quintessence.
- Neville, B.W. (2002). Dermatologic Diseases. In B.W. Neville, D.D. Damm, C.M. Allen & J.E. Bouquot *Oral and maxillofacial pathology* (2nd Ed), (pp. 655-657). Philadelphia, PA: Saunders.
- Ioannides, D., Lasaridou, E. & Rigopoulos, D. (2008). Pemphigus. *Journal of European academy of dermatology and venereology*, 22(12), (pp. 1478-1496).
- Olszewska, M., Kolacinska-Strasz, Z., Labecka, H., Cwikla, J. Natorka, U. & Blazczyk, M. (2007). Efficacy and safety of cyclophosphamide, azathioprine and cyclosporine (ciclosporin) as adjunctive drugs in pemphigus vulgaris. *American journal of clinical dermatology*, 8(2), (pp. 85-92).
- (1997). *Oral and maxillofacial surgery clinics of north America* (pp. 644-646).
- Philipsen, J.P., Reichart, P.A. & Zhang, K.H. (1991). Adenomatoid odontogenic tumor: biologic profile based on 499 cases. *Journal of oral pathology medicine*, 20, (pp. 149-158).



- Carlson, E.R. (2004). Odontogenic cysts and tumors. In M. Miloro, G.E. Ghali, P.E. Larsen & P.D. White (Eds). *Peterson's principles of oral and maxillofacial surgery*, (vol.1), (pp. 575-596). BC Decker.
- Holmes, J. & Dierks, E. (2004). Oral cancer treatment. *Peterson's principles of oral and maxillofacial surgery*, (2nd Ed), (pp. 631-657). BC Decker.
- Zarbo, R.J. & Carlson, E.R. (2003). Malignancies of the jaws. In J. Regezi, J. Sciubba & R. Jordan (Eds.) *Oral pathology, clinical pathologic correlations*, (4th Ed.) (pp. 336). St. Louis, MO: Elsevier.
- Bell, R. B. & Dierks, E. J. (2003). *Oral and maxillofacial clinics of north America*, (15), (pp. 429-446).
- Braumann, A., Russmueller, G., Poeschl, E. et. al (2009). Closure of oroantral communications with bichat's buccal fat pad. *Journal of oral and maxillofacial surgery*, 67, (pp. 1460-1466).
- Papadopoulos, H., Samant, S. & Curtis, N. (2007). Management of oral-antral fistulas: state of the art treatment. *Selected readings in oral and maxillofacial surgery*, 15.5, (1-27).

Reconstruction

- Baker, S.R. & Swanson, N.A. (1995). *Local flaps in facial reconstruction*, (pp. 15-30). Mosby.
- Peacock, Z.S., Pogrel, M.A. & Schmidt, B.L. (2008). Exploring the reasons for delay in treatment of oral cancer. *Journal of American dental association*, 139(10), (pp. 1346-52).
- Herford, A. S. (2005). Recombinant human bone morphogenetic protein-2 (Rh BMP-2). *Journal of oral and maxillofacial surgery*, 63(8), (pp. 14-15).
- Marx, R. E. & Triplett, R. G. (2006). Clinical applications of recombinant bone morphogenetic protein-2 (rhBMP-2). *Journal of oral and maxillofacial surgery*, 64(9), (pp. 98-99).
- Baur, D.A. (2003). The platysma myocutaneous flap. *Oral and maxillofacial surgery clinics of north America*, (pp. 559-564).
- Roldan, J.C., Teschke, M., Fritzer, E., Dunsche, A., Harle, F., Wilfang, J. & Terheyden, H. (2007). Reconstruction of the lower lip rationale to preserve the aesthetic units of the face. *Journal of plastic reconstructive surgery*, 120(5), (pp. 1231-1239).
- Calhoun, K. H. (1992). Reconstruction of small and medium-sized defects of the lower lip. *American journal of orolaryngol*, 13(1), (pp. 16-22).



Implants

Erkut, S. & Uckan, S. (2006). Links alveolar distraction osteogenesis and implant placement in a severely resorbed maxilla: a clinical report. *Journal of prosthetic dentistry*, (95(5), (pp. 340-343).

Management of vertical defects for implant reconstruction (2006). *Selected readings in oral and maxillofacial surgery*, 14(3). Jacksonville, FL: Walter Lorenz Surgical Instruments.

Block, M. (1999). *Atlas of the oral and maxillofacial surgery clinics of north America*, 7(2), (pp. 95-107).

Ata-Ali, J. (2014). Do antibiotics decrease implant failure and postoperative infections? A systematic review and meta-analysis. *International journal of oral and maxillofacial surgery*, 43, (pp. 68-74).