Pre-Specialist Examination – Questions and Rationale for Answers

These questions and their rationale are provided to encourage reading and learning. All knowledge in medicine is perishable and what were the single best answers at the time the questions were written may no longer be the best answers. In the abscence of evidence the answers might represent common opinion rather than fact.

Question	Rationale
1) A 50 year old man is undergoing treatment for a T4aN2bM0 squamous cell carcinoma of the right ventral-lateral tongue. As part of the surgical management a modified radical neck dissection (Comprehensive) is required. **In a type III modified radical neck dissection, what of the following are preserved:** Internal jugular vein Spinal accessory Nerve Spinal accessory and internal jugular vein **Spinal accessory, internal jugular vein and sternocleidomastoid muscle**	Type I MRND: spinal accessory nerve is preserved Type II: spinal accessory nerve and internal jugular vein are preserved Type III: spinal accessory nerve, internal jugular vein and sternocleidomastoid muscle are preserved
2) You are called to the emergency department to assess a patient with suspected panfacial fractures and lowered Glasgow Coma Scale (GCS). By the time of your arrival the patient is already intubated as intracranial bleeding is suspected and the airway deemed unsafe. The patient is showing no signs of injury below the head and neck. Their left eye is proptosed, chemosed, tense and has diffuse subconjunctival haemorrhage. The surrounding skin is grossly swollen with ecchymosis which interferes with your examination. You are unsure if you can elicit a pupil response. What is the first immediate treatment you should perform? Administer mannitol, steroids and/or acetazolamide CT head and facial bones to assess injury Hyperventilate the patient to aim for low normal PaCO2 **Lateral canthotomy and cantholysis**	Orbital compartment syndrome with traumatic visual impairment is a serious complication in patients with midface injuries. Due to a space-occupying intraorbital hematoma, there is an increase in intraorbital pressure with subsequent impairment of perfusion of the retina and the optic nerve. Amaurosis of the affected eye usually results if the intraorbital pressure is not reduced immediately by lateral canthotomy and cantholysis.
3) For a patient awaiting radiotherapy for oral squamous cell carcimona (SCC) which would be the best time to perform dental extractions? 1 week before starting radiotherapy **2 weeks before starting radiotherapy** 1 week after finishing radiotherapy 3 months after finishing radiotherapy	Dental extractions should be performed at least 2 weeks before radiotherapy to give the tissue the chance to start healing and prevent osteonecrosis of the jaw.
4) Select the LEAST stable orthognathic movement Genioplasty **Mandibular set back** Maxillary impaction Maxillary advancement	In order to perform a mandibular set back, a part of the bone has to be cut out in the area of the osteotomy. Therefore, the bone attachment surface is reduced which makes is less stable than the other orthognathic movements. Also the activity of the anterior muscles between the floor of the mouth and the hyoid bone lead to movement in the anterior direction.

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5) A negative ANB angle correlates to Retrogenia Class I skeletal relationship Class II skeletal relationship **Class III skeletal relationship**	Class I: 0-4° Class II: >4° Class III: <0°
6) During a neck dissection you sacrifice the great auricular nerve which supplies sensation to the skin over the angle of the jaw and the ear lobe. Choose the most appropriate origin of this nerve Trigeminal nerve (CN5) C1 and C2 **C2 and C3** C3 and C4	The great auricular nerve originates in the C2 and C3 spinal cord segments.
7) A patient reports that when her skin is exposed to sun, she usually burns, and tans with difficulty. This patient is best classified as a Fitzpatrick skin type: I. **II.** III. IV.	Since the patient has the ability to tan, it is class ll. The Fitzpatrick Skin type I does not have this ability to tan at all.
8) Scar modification using a 60 degree Z-Plasty technique will increase the over length of the laceration by how much? 35% 45% **75%** 95%	When incising the long wound axis, the incisions are made at an angle of 60°, with the lateral legs of the same length as the central axial incision. The triangular skin areas are undermined and sutured to each other in an exchanged manner. For 60° angles, the lengthening corresponds to 75%. The longer the central limb of the Z incision, the longer the lateral incisions must be.
9) Vertical glabellar frown lines are caused by the action of which muscle? **Corrugator** Frontalis Orbicularis Procerus	The musculus corrugator origins from the medial end of the superciliary arches and inserts in the skin above the middle of supraorbital margin. When contracting, it causes vertical wrinkels over the glabella.
10) Horner's syndrome results from damage to which nerve fibers? Parasympathetic fibers to the pupil Oculomotor nerve Optic nerve **Sympathetic fibers to the pupil**	Horner's syndrome is a disorder of the sympathetic part of the nervous system which innervates the pupil of the eyes. It is characterized by the triad ptosis, miosis, (pseudo)enophthalmos.
11) In the classic Millard (Rotation-Advancement) technique for cleft lip repair, the C flap may be utilized for reconstruction of the nostril sill or: for recreating the philtral column on the cleft side. **for lengthening the cleft side columella.** for performing a gingivoperiosteoplasty, may be banked for use at a later date,	When the vertical lip incision and horizontal back cut are carried out, a segment of skin along the base of the columella is created and referred to as the C-flap. This C-flap is a portion of excess skin within the medial superior lip/prolabial area that can be used as part of the nasal sill repair or incorporated into the medial lip segment to create additional length.

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12) In a Floor of Mouth Squamous Cell Carcinoma in a 65 year old man the best investigation to delineate bony invasion is MRI **CT** OPG Bone scan	CT imaging is the adequate choice for evaluating bone invasion because it can best and most accurately visualize the bone. CT imaging is additionally superior to conventional radiographic imaging due to its three-dimensional imaging. MRI is primary indicated to evaluate the soft tissue.
13) You are reviewing a patient one month following surgical removal of their lower wisdom teeth. Their only complaint is of significant loss of sensation of the right side of the tongue, with some disturbance of taste. There has been minimal improvement in the last week. This is best managed by **arranging further follow up in another two months.** discharge of patient with apologies for the recognised complication and advise about avoiding injury to the tongue. exploration of the surgical site under local anaesthesia. immediate admission and exploration of the surgical site, with possible nerve repair.	In case of clinical indications of an incipient regeneration of sensibility, such as tingling and transition from anesthesia to hypesthesia, there is no indication for surgical intervention after one month. A further, usually complete, return of function can be expected in the next few months, but should be continuously monitored neurologically - also for forensic reasons.
14) If the lingual alveolar plate is fractured and mobile during removal of an erupted mandibular third molar, the fractured segment should be: **left in place with minimal manipulation.** stabilized to avoid damage to the lingual nerve. removed with careful subperiosteal dissection. removed and the lingual nerve explored for evidence of injury.	Removal of a mobile alveolar bone plate increases the risk of damage to the lingual nerve. Therefore, the lingual alveolar bone plate should be moved as little as possible and left in place.
15) Which of the following is the most common source of venous bleeding during maxillary osteotomy at the LeFort I level? Descending palatine veins Facial vein Laceration of the pterygoid musculature **Pterygoid venous plexus**	The pterygoid venous plexus is a venous plexus in the infratemporal fossa. It receives inflow from the sphenopalatine vein, the inferior ophthalmic vein, the inferior alveolar vein, the temporal veins, and the venae temporales profundae. The outflows drain directly or indirectly into the maxillary vein, to the retromandibular vein. This can lead to significant venous bleeding if injured during a maxillary osteotomy at the LeFort I level.
16) A 16-year-old female patient undergoes a Le Fort I osteotomy for maxillary impaction. Two days after surgery, guiding elastics are removed and assessment of the patient's occlusion reveals an anterior open bite. What is the most likely cause of this complication? Failure of maxillary hardware Incomplete down fracture of the maxilla during surgery **Incomplete seating of the condyles during surgery** Severe condylar resorption associated with fixation	Incomplete seating of the condyles during surgery (elastics distracting the condylar heads from the glenoid fossa) is the most common cause of an anterior open bite after bimaxillary surgery. This operative error can be disguised by post-operative elastics which hold the occlusion but distract the condyles. It is important, when the IMF is released at the end of the operation that the occlusion is checked with the condyles guided into the fossa.

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17) What is the minimum amount of time a parotid stent be kept in place after a ductal repair? **2-4 weeks** 6-8 weeks 10-12 weeks 16-18 weeks	To prevent a stenosis after ductal repair, the stent needs to be left in place at least 2-4 weeks to give the tissue enough time to heal.
18) The best reconstruction of a lower lip defect more than 2/3 of the lip is Abbe flap Johansen step ladder **Karapandzic flap** Primary closure	Larger defects that are one-third to two-thirds of the width of the lower lip can be closed with the Karapandzic flap. If the commissure is involved, both the Karapandzic and Estlander flaps can be used; however, the Karapandzic flap is the better choice because it is better at maintaining oral competence.
19) Following repair of pan-facial fractures, a patient develops diplopia, orbital proptosis, and reports an unusual buzzing sound. What is the most likely diagnosis? **Carotid-cavernous fistula** Cavernous sinus thrombosis Orbital apex syndrome Temporal arteritis	Traumatic sinus cavernous fistula results in flow-related ear noise, pulsatile exophthalmos, diplopia, and compression-related loss of cranial nerves (III, IV, VI) passing through the sinus cavernous wall, among other symptoms.
20) In the unrepaired cleft palate, the levator veli palatini muscle inserts abnormally into: lateral pterygoid plate. medial pterygoid plate Passavant's ridge. **posterior hard palate.**	The levator veli palatini muscle inserts at the palatine aponeurosis. As in an unrepaired cleft palate, the palatine aponeurosis is missing, the muscle inserts abnormally into the posterior hard plate.
21) Which of the following is more characteristic of a thin split-thickness skin graft (STSG) when compared to a thick STSG? Decreased secondary contracture of the graft **Increased probability of graft survival** More likely to result in recipient site hair growth Slower donor site re-epithelialization	The nutrition of an STSG is only by diffusion of oxygen nutrient fluids. Therefore, thinner STSGs have an increased probability of graft survival compared to thicker STSGs.
22) Low-grade mucoepidermoid carcinoma of the posterior mandible with no perforation of the bone and no lymphadenopathy is best treated by which of the following protocols? Radiation followed by chemotherapy **Resective surgery alone** Resective surgery and post-surgical chemotherapy Resective surgery and post-surgical radiation	Surgical treatment alone of low-grade mucoepidermoid carcinoma is the standard of care.

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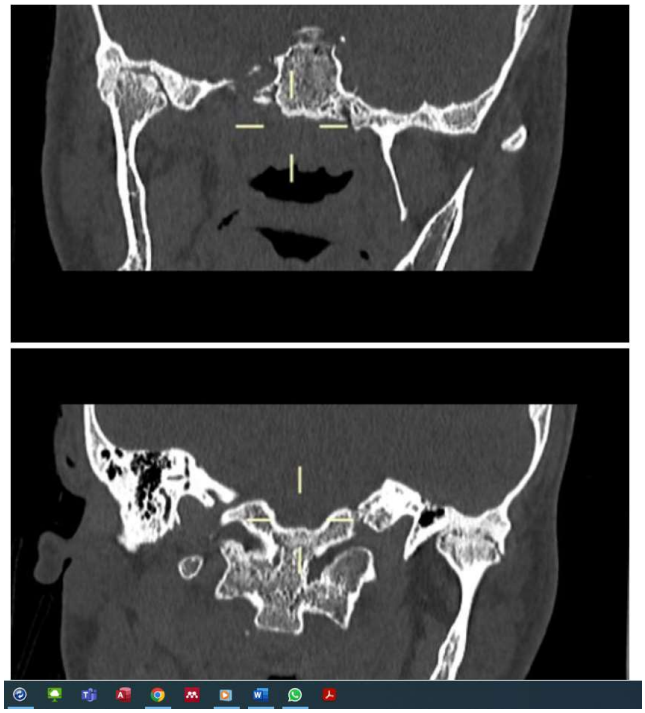
23) A 48-year-old woman presents with a history of metastatic breast carcinoma, previous mastectomy, and radiation to the chest. She continues periodic chemotherapy infusions for control of her disease. Her general dentist extracted lower right first molar and has now referred the patient to you for a non-healing socket and bone exposure in the area. The most likely cause of the non-healing site is: **bisphosphonates included in the chemotherapy regimen.** failure to attain primary closure at the time of extraction. osteoradionecrosis secondary to the radiation therapy. traumatic extraction with failure of the patient to follow instructed home care.	Bisphosphonate therapy may reduce osseous recurrence and pain. It prolongs cancer-specific survival in women with early breast cancer. In a period of up to 10 years after receiving therapy, there is an increased risk of drug-associated osteonecrosis of the jaw after tooth extractions.
24) During routine extraction of a maxillary first molar with radiographic periapical pathology, a 5mm fragment of the palatal root is dislodged into the maxillary sinus. What is the most appropriate next step? Completion of an antibiotic course and observation Obtain a CT scan of the maxillary sinus Perform a Caldwell-Luc antrostomy **Retrieval through the extraction socket after careful visualization**	The patient's movements should be kept to a minimum to prevent further dislocation of the root in the maxillary sinus. The first attempt should be to remove the root via the safest and least invasive procedure possible, which is via the extraction socket.
25) Which of the following statements, regarding alveolar osteitis (dry socket), is true? Generally develops 7-10 days after surgery Is a localized bone infection **Is theoretically caused by lysis of a fully formed blood clot prior to its replacement by granulation tissue** Requires vigorous bone scraping under local anesthesia to stimulate new blood clot formation	Dry sockets generally develop 1-3 days after tooth extraction. It is caused by an insufficient primary blood clot or lysis of a full formed blood clot prior to its replacement by granulation tissue. The local infection can cause an ostitis or osteomyelitis.
26) A 37 year old man had his left condylar base fracture plated 8 weeks ago. He returns to clinic with a malocclusion. An OPT taken in clinic showed the fracture site had moved causing shortening of the ramus on the affected side. Which is the best next step? Accept malocclusion and continue conservative management **CT scan of mandible** Inter-maxillary fixation and removal of osteosynthesis plates Redo-ORIF left condylar fracture	In this case, a CT scan of the mandible is necessary to identify the cause of the ramus shortening. For example, this could be resorption, renewed fracture of the bone or osteosynthesis. On basis of the new images, further therapy steps can then be planned.
27) Which muscle of the soft palate opens the pharyngeal end of the Eustachian tube? palatoglossus palatopharyngeus musculus uvulae **tensor veli palatini**	The tensor veli palatini muscle tightens the soft palate and supports the act of swallowing. Its contraction opens the tuba auditiva and thus ensures pressure equalization in the tympanic cavity.

Question	Rationale
28) An adult patient in a fully equipped and staffed theatre has a difficult intubation. The anaesthetist is unable to intubate or ventilate and cannot wake the patient or place a supra-laryngeal device. The first line surgical procedure should be **Emergency cricothyroidotomy** Emergency tracheostomy Jet insufflation Nasal intubation	This is a 'can't intubate, can't ventilate' emergency CICV In order to quickly and safely ventilate the patient, a crico-thyridotomy should be performed. https://das.uk.com/guidelines/cvci.html
29) A patient presents with a 3 month history of an ulcer on the tongue. Biopsy confirms squamous cell carcinoma. On palpation, the tumour feels thin and superficial and measures 1.5 x 1.5 cm. There is no lymphadenopathy in the neck. The stage by TNM 8 would be Cannot give clinical stage until have pathological confirmation of tumour thickness. **T1N0** T1Nx T2N0	If the largest tumor extension is ≤ 2 cm, it should be classified as T1. Since the largest clinical dimension of the tumor is 1.5 cm and the thin palpation findings, the present squamous epithelium is clinically classified as T1. Clinically, no lymph nodes are palpable, which corresponds to the classification N0.
30) This CT belongs to a 46 year patient who has had decreasing jaw movement and decreasing joint pain over the past 18 months. **Choose the treatment option which would NOT be appropriate i.e. the least appropriate for this patient.**  **Diagnostic TMJ arthroscopy** Gap arthroplasty and stock TMJ prosthesis Gap athroplasty and temporalis flap reconstruction Physiotherapy	In the present CT imaging, uneven narrowing of the joint space, subchondral sclerosis, osteophytes, and subchondral nodular cysts can be seen. These definite signs of osteoarthritis do not require further diagnosis by TMJ arthroscopy.

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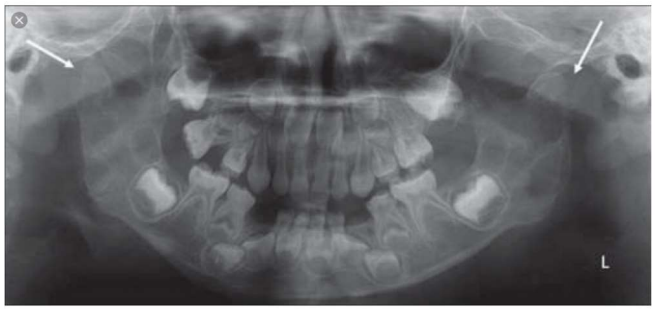
31) Which suture is involved in the following image?  Bicoronal Metopic **Saggital** Unicoronal	In case of closure of the sagittal sutura, an asymmetric head growth develops with formation of a scaphocephalus, which can be recognized on the basis of its elongated skull shape in the image.
32) A 10 year old boy presents with the following OPT 1 week after a fall off his bike. He is complaining of difficulty opening his mouth. What is the best management plan?  Inter-maxillary fixation Plating of both fractures (open reduction and internal fixation) Reassess in 1 week for MUA and inter-maxillary fixation **Soft diet and analgesics**	Gentle treatment with a soft diet and analgesia as needed are the means of choice in this clinical picture. Irrespective of the clinical picture, open surgical therapy by plating should be avoided due to the age of the patient and the expected growth.
33) Choose the correct statement regarding the paramedian forehead flap Blood supply is principally from the infratrochlear vessel It is a one stage procedure It is a random pattern flap Pedicle width should be approximately 15mm	The supratrochlear artery is the pedicle of the paramedian forehead flap and therefore the flap is a axial pattern flap. The paramedian forehead flap should be created vertically to include the vertical axial blood supply and can subsequently be used in a two-stage surgical procedure, for example, to reconstruct nasal defects.

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34) A female, 24 yrs old, patient complains of symptoms from her TMJs bilaterally. On clinical examination presents an anterior open bite and obtuse mandibular angle. Choose the best options from the following treatment options Conservative treatment (soft diet, physiotherapy, medication) **Conservative treatment primarily and surgery & orthodontics secondary** Injection of BoTox A to all muscles of mastication Occlusal splint	This question is about patient with idiopathic condylar resorption. The age, gender and presentation with AoB differentiate it from other TMJ problems. Initial management is conservative but surgery/orthodontics are appropriate when changes have stabilized. Idiopathic condylar resorption: The current understanding in diagnosis and treatment https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5450893/
35) A 65 year old was listed to have a lesion removed from his left cheek **There was noticeable scarring at the site of the lesion with no sign of the lesion on the day of surgery. What is your diagnosis?**  Keratin horn **Keratoacanthoma** Pyogenic granuloma Solar keratosis	The photograph shows a keratoacanthoma with central retraction and erosion. Additionally, the surface is smooth and shows single telangiectasias, which is typical for a keratoacanthoma.
36) As a senior oral and maxillofacial surgery trainee, you are called to the emergency department to see a 32 year old male patient who was stabbed in the posterior triangle of the neck. The Emergency Department team of doctors are in the resuscitation area managing 4 injured and unstable patients after a road traffic collision. Your patient is sitting up with: O2 saturations are 98%, Respiratory Rate 18, Pulse 127, Blood pressure 127/87, Temperature 36.8 **What should YOU do next in the management of this patient?** Explore the laceration **Place 2 large bore cannula and give 2L warm Hartmann's solution** Place chest drain Take for immediate trauma CT scan	Stab wounds carry a high risk of circulation destabilizing bleeding. Therefore, 2 large-bore cannulas should be inserted to stabilize the cardiovascular system by means of 2 l of warm Hartmann's solution in case of hemorrhage.

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37) In raising a scapula osseocutaneous free flap Identifying the intermuscular septum between Latissimus Dorsi and Teres Major is a key step as it contains the Circumflex Scapular Artery Identifying the Quadrangular Space is key step as it contains Subscapular Artery **Identifying the Triangular space between Teres Major, Teres Minor and the long head of Triceps muscle is a key step as it contains the Circumflex Scapula Artery** The pedicle length for a scapular osseocutaneous free flap is up to 9.5 cm	Dissection of the lateral circumflex scapular artery should occur in the triangular space at the lateral border of the scapula. This triangle is formed by the teres major, teres minor and the long head of the triceps muscle.
38) Which factor below is part of the extrinsic coagulation pathway? **VII** VIII IX XII	Factor Vll belongs to the extrinsic pathway of coagulation. The other factors mentioned, on the other hand, belong to the intrinsic pathway.
39) Define the minimum distance **a) between two dental implants and** **b) between a dental implant and a tooth** a) 1.5 mm and b) 3 mm a) 3.5 mm and b) 2 mm **a) 3 mm and b) 1.5 mm** a) 3 mm and b) 3 mm	The minimum distance between two implants should not be less than 3 mm. The minimum distance between the dental implant and the tooth should not be less than 1.5 mm. These distances are at least necessary to keep a safe and stable bony scaffold for implantation.
40) Which benign tumor of the parotid glands is highly associated with smoking tobacco? Basal cell adenoma **Cystadenolymphoma (Whartin´s tumor)** Monomorphic adenoma Pleomorphic adenoma	Cystadenolymphoma of the parotid gland is etiologically associated with nicotine use and/or ionizing radiation
41) In a patient with a tumor of 3 x 3 x 3.5 cm in left parotid region associated with ulceration of the skin and facial paralysis, choose the single best answer from the following? Adenoid cystic carcinoma Pleomorphic adenoma **Squamous cell carcinoma** Warthin's tumor	In contrast to the other possible answers, squamous cell carcinoma grows destructively, which is indicated in the question by ulceration of the skin and facial paralysis.
42) Which is true for surgical repair of a lip laceration? A laceration totally within the vermillion (which does not cross onto skin) should allowed to heal by secondary intention to avoid scar induced deformity Because of the potential of contamination by saliva, excision of the wound rims is mandatory Concomitant intra-oral lacerations should be treated after lip repair to minimize the hazard of contamination by saliva **Exact reconstruction of the vermillion line is crucial**	A laceration of the lip in the area of the vermillion line represents an aesthetically demanding wound situation, which can only be appropriately repaired by meticulous reconstruction of the vermillion line.

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43) A superiorly based platysma flap receives its dominant blood supply from which of the following vessels? Occipital artery **Submental branch of the facial artery** Superior thyroid artery Transverse cervical artery	The superiorly based platysma flap has a reliable arterial blood supply from the submental branch of the facial artery.
44) What is the clinical diagnosis in this case?  Craniofrontonasal dysplasia Hemi-facial microsomia (OAVS) Hemimandibular hypertrophy **Treacher Collins syndrome**	The most common symptoms of Treacher Collins syndrome is downward angled eyelids, underdevelopment of the lower jaw and underdevelopment of the zygomatic bone. which give the cheeks a sunken appearance. The external ear is often malformed, small, and rotated. This syndrome is an inherited condition (autosomal dominant) and also called Franceschetti-Zwahlen-syndrome.
45) The best donor site for harvest of bone to reconstruct a 3.5 cm segmental defect of the mandible after removal of an ameloblastoma would be which of the following? Clavicle Fibula **Iliac crest** Tibia	If a mandibular defect of 3.5 cm is present, bone from the iliac crest due to its perfect fit, especially for the loading with dental implants, is the treatment option of choice.
46) Anastamosis of which pair of vessels provides for in-flow and out-flow for a vascularized fibula flap? Anterior tibial artery and venae commitantes **Peroneal artery and venae commitantes** Popliteal artery and popliteal vein Posterior tibial artery and venae commitantes	Blood supply to the vascularized fibular transplant is through the peroneal artery and venous drainage through its venae commitantes (Vv. peroneae).
47) Regarding bilateral total cleft lip, which statement is true? Surgical treatment of the lip is always undertaken in two separate procedures Surgical treatment of the lip is always complete in a single surgical procedure The reconstruction of the lip should be simultaneous with reconstruction of cleft palate **Two–stage or one-stage closure of the lip may be appropriate, depending on the nature of the cleft**	Current evidence is not conclusive between one and two stage repair https://pubmed.ncbi.nlm.nih.gov/34018417/ https://pubmed.ncbi.nlm.nih.gov/29351180/ A one-stage procedure of bilateral cleft lip offers favorable results in terms of a more symmetrical and smoother lip and nose after primary reconstruction. A two-stage procedure, on the other hand, is a favorable procedure in patients with asymmetric bilateral cleft lip, so the decision of a one-stage or two-stage procedure should be based on the nature of the cleft.

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48) Which statement is true: Melanoma is a tumour that does not metastasize. **Melanoma may arise from skin or mucosa** Melanoma only affects skin. The use of PET has no diagnostic value for distant disease.	Malignant melanoma is an aggressive tumor of the skin originating from melanocytes. Melanomas form metastases already in early stages, which can metastasize to the lymph nodes, lungs or visceral organs, among others.
49) When treating an anterior open bite, which maxillary movement give the most stable post-operative result? Maxillary advancement Maxillary expansion **Posterior maxillary impaction** Total maxillary impaction	The impaction of the posterior maxilla decisively counteracts the anterior open bite. A total maxillary impaction, on the other hand, would not solve the malocclusion problem.
50) Which is true in terms of temporomandibular alloplastic joint replacement? CAD-CAM manufactured endoprosthesis is currently the only option for alloplastic TMJ reconstruction Metal allergies are of low importance in this field Normal mouth opening can be expected right after surgery **The transplantation of allogenic fat at the same surgery with joint replacement seems to reduce the risk of heterotopic bone formation**	Heterotrophic bone is a pathological formation of bone tissue that can occur in the course of surgical trauma due to activation of the inflammatory system as well as the innate immune system. Scientific evidence has shown that the use of allogeneic fat can counteract this excessive inflammatory and immunological formation of bone in temporomandibular joint alloplastic. Nevertheless, the current literature is limited and further research is needed.

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15) Which of the following is the most common source of venous bleeding during maxillary osteotomy at the LeFort I level? Descending palatine veins Facial vein Laceration of the pterygoid musculature **Pterygoid venous plexus**	The pterygoid venous plexus is a venous plexus in the infratemporal fossa. It receives inflow from the sphenopalatine vein, the inferior ophthalmic vein, the inferior alveolar vein, the temporal veins, and the venae temporales profundae. The outflows drain directly or indirectly into the maxillary vein, to the retromandibular vein. This can lead to significant venous bleeding if injured during a maxillary osteotomy at the LeFort I level.
16) A 16-year-old female patient undergoes a Le Fort I osteotomy for maxillary impaction. Two days after surgery, guiding elastics are removed and assessment of the patient's occlusion reveals an anterior open bite. What is the most likely cause of this complication? Failure of maxillary hardware Incomplete down fracture of the maxilla during surgery **Incomplete seating of the condyles during surgery** Severe condylar resorption associated with fixation	Incomplete seating of the condyles during surgery (elastics distracting the condylar heads from the glenoid fossa) is the most common cause of an anterior open bite after bimaxillary surgery. This operative error can be disguised by post-operative elastics which hold the occlusion but distract the condyles. It is important, when the IMF is released at the end of the operation that the occlusion is checked with the condyles guided into the fossa.

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17) What is the minimum amount of time a parotid stent be kept in place after a ductal repair? **2-4 weeks** 6-8 weeks 10-12 weeks 16-18 weeks	To prevent a stenosis after ductal repair, the stent needs to be left in place at least 2-4 weeks to give the tissue enough time to heal.
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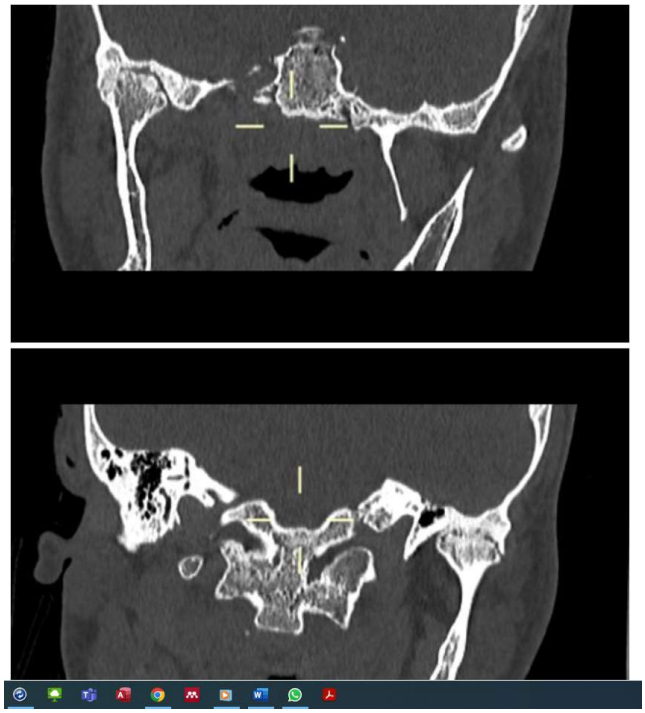
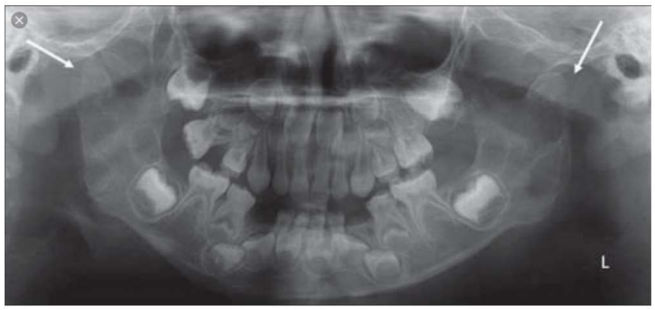
21) Which of the following is more characteristic of a thin split-thickness skin graft (STSG) when compared to a thick STSG? Decreased secondary contracture of the graft **Increased probability of graft survival** More likely to result in recipient site hair growth Slower donor site re-epithelialization	The nutrition of an STSG is only by diffusion of oxygen nutrient fluids. Therefore, thinner STSGs have an increased probability of graft survival compared to thicker STSGs.
22) Low-grade mucoepidermoid carcinoma of the posterior mandible with no perforation of the bone and no lymphadenopathy is best treated by which of the following protocols? Radiation followed by chemotherapy **Resective surgery alone** Resective surgery and post-surgical chemotherapy Resective surgery and post-surgical radiation	Surgical treatment alone of low-grade mucoepidermoid carcinoma is the standard of care.

Question	Rationale
23) A 48-year-old woman presents with a history of metastatic breast carcinoma, previous mastectomy, and radiation to the chest. She continues periodic chemotherapy infusions for control of her disease. Her general dentist extracted lower right first molar and has now referred the patient to you for a non-healing socket and bone exposure in the area. The most likely cause of the non-healing site is: **bisphosphonates included in the chemotherapy regimen.** failure to attain primary closure at the time of extraction. osteoradionecrosis secondary to the radiation therapy. traumatic extraction with failure of the patient to follow instructed home care.	Bisphosphonate therapy may reduce osseous recurrence and pain. It prolongs cancer-specific survival in women with early breast cancer. In a period of up to 10 years after receiving therapy, there is an increased risk of drug-associated osteonecrosis of the jaw after tooth extractions.
24) During routine extraction of a maxillary first molar with radiographic periapical pathology, a 5mm fragment of the palatal root is dislodged into the maxillary sinus. What is the most appropriate next step? Completion of an antibiotic course and observation Obtain a CT scan of the maxillary sinus Perform a Caldwell-Luc antrostomy **Retrieval through the extraction socket after careful visualization**	The patient's movements should be kept to a minimum to prevent further dislocation of the root in the maxillary sinus. The first attempt should be to remove the root via the safest and least invasive procedure possible, which is via the extraction socket.
25) Which of the following statements, regarding alveolar osteitis (dry socket), is true? Generally develops 7-10 days after surgery Is a localized bone infection **Is theoretically caused by lysis of a fully formed blood clot prior to its replacement by granulation tissue** Requires vigorous bone scraping under local anesthesia to stimulate new blood clot formation	Dry sockets generally develop 1-3 days after tooth extraction. It is caused by an insufficient primary blood clot or lysis of a full formed blood clot prior to its replacement by granulation tissue. The local infection can cause an ostitis or osteomyelitis.
26) A 37 year old man had his left condylar base fracture plated 8 weeks ago. He returns to clinic with a malocclusion. An OPT taken in clinic showed the fracture site had moved causing shortening of the ramus on the affected side. Which is the best next step? Accept malocclusion and continue conservative management **CT scan of mandible** Inter-maxillary fixation and removal of osteosynthesis plates Redo-ORIF left condylar fracture	In this case, a CT scan of the mandible is necessary to identify the cause of the ramus shortening. For example, this could be resorption, renewed fracture of the bone or osteosynthesis. On basis of the new images, further therapy steps can then be planned.
27) Which muscle of the soft palate opens the pharyngeal end of the Eustachian tube? palatoglossus palatopharyngeus musculus uvulae **tensor veli palatini**	The tensor veli palatini muscle tightens the soft palate and supports the act of swallowing. Its contraction opens the tuba auditiva and thus ensures pressure equalization in the tympanic cavity.

Question	Rationale
28) An adult patient in a fully equipped and staffed theatre has a difficult intubation. The anaesthetist is unable to intubate or ventilate and cannot wake the patient or place a supra-laryngeal device. The first line surgical procedure should be **Emergency cricothyroidotomy** Emergency tracheostomy Jet insufflation Nasal intubation	This is a 'can't intubate, can't ventilate' emergency CICV In order to quickly and safely ventilate the patient, a crico-thyridotomy should be performed. https://das.uk.com/guidelines/cvci.html
29) A patient presents with a 3 month history of an ulcer on the tongue. Biopsy confirms squamous cell carcinoma. On palpation, the tumour feels thin and superficial and measures 1.5 x 1.5 cm. There is no lymphadenopathy in the neck. The stage by TNM 8 would be Cannot give clinical stage until have pathological confirmation of tumour thickness. **T1N0** T1Nx T2N0	If the largest tumor extension is ≤ 2 cm, it should be classified as T1. Since the largest clinical dimension of the tumor is 1.5 cm and the thin palpation findings, the present squamous epithelium is clinically classified as T1. Clinically, no lymph nodes are palpable, which corresponds to the classification N0.
30) This CT belongs to a 46 year patient who has had decreasing jaw movement and decreasing joint pain over the past 18 months. **Choose the treatment option which would NOT be appropriate i.e. the least appropriate for this patient.**  **Diagnostic TMJ arthroscopy** Gap arthroplasty and stock TMJ prosthesis Gap athroplasty and temporalis flap reconstruction Physiotherapy	In the present CT imaging, uneven narrowing of the joint space, subchondral sclerosis, osteophytes, and subchondral nodular cysts can be seen. These definite signs of osteoarthritis do not require further diagnosis by TMJ arthroscopy.

Question	Rationale
31) Which suture is involved in the following image?  Bicoronal Metopic **Saggital** Unicoronal	In case of closure of the sagittal sutura, an asymmetric head growth develops with formation of a scaphocephalus, which can be recognized on the basis of its elongated skull shape in the image.
32) A 10 year old boy presents with the following OPT 1 week after a fall off his bike. He is complaining of difficulty opening his mouth. What is the best management plan?  Inter-maxillary fixation Plating of both fractures (open reduction and internal fixation) Reassess in 1 week for MUA and inter-maxillary fixation **Soft diet and analgesics**	Gentle treatment with a soft diet and analgesia as needed are the means of choice in this clinical picture. Irrespective of the clinical picture, open surgical therapy by plating should be avoided due to the age of the patient and the expected growth.
33) Choose the correct statement regarding the paramedian forehead flap Blood supply is principally from the infratrochlear vessel It is a one stage procedure It is a random pattern flap Pedicle width should be approximately 15mm	The supratrochlear artery is the pedicle of the paramedian forehead flap and therefore the flap is a axial pattern flap. The paramedian forehead flap should be created vertically to include the vertical axial blood supply and can subsequently be used in a two-stage surgical procedure, for example, to reconstruct nasal defects.

Question	Rationale
34) A female, 24 yrs old, patient complains of symptoms from her TMJs bilaterally. On clinical examination presents an anterior open bite and obtuse mandibular angle. Choose the best options from the following treatment options Conservative treatment (soft diet, physiotherapy, medication) **Conservative treatment primarily and surgery & orthodontics secondary** Injection of BoTox A to all muscles of mastication Occlusal splint	This question is about patient with idiopathic condylar resorption. The age, gender and presentation with AoB differentiate it from other TMJ problems. Initial management is conservative but surgery/orthodontics are appropriate when changes have stabilized. Idiopathic condylar resorption: The current understanding in diagnosis and treatment https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5450893/
35) A 65 year old was listed to have a lesion removed from his left cheek **There was noticeable scarring at the site of the lesion with no sign of the lesion on the day of surgery. What is your diagnosis?**  Keratin horn **Keratoacanthoma** Pyogenic granuloma Solar keratosis	The photograph shows a keratoacanthoma with central retraction and erosion. Additionally, the surface is smooth and shows single telangiectasias, which is typical for a keratoacanthoma.
36) As a senior oral and maxillofacial surgery trainee, you are called to the emergency department to see a 32 year old male patient who was stabbed in the posterior triangle of the neck. The Emergency Department team of doctors are in the resuscitation area managing 4 injured and unstable patients after a road traffic collision. Your patient is sitting up with: O2 saturations are 98%, Respiratory Rate 18, Pulse 127, Blood pressure 127/87, Temperature 36.8 **What should YOU do next in the management of this patient?** Explore the laceration **Place 2 large bore cannula and give 2L warm Hartmann's solution** Place chest drain Take for immediate trauma CT scan	Stab wounds carry a high risk of circulation destabilizing bleeding. Therefore, 2 large-bore cannulas should be inserted to stabilize the cardiovascular system by means of 2 l of warm Hartmann's solution in case of hemorrhage.

Question	Rationale
37) In raising a scapula osseocutaneous free flap Identifying the intermuscular septum between Latissimus Dorsi and Teres Major is a key step as it contains the Circumflex Scapular Artery Identifying the Quadrangular Space is key step as it contains Subscapular Artery **Identifying the Triangular space between Teres Major, Teres Minor and the long head of Triceps muscle is a key step as it contains the Circumflex Scapula Artery** The pedicle length for a scapular osseocutaneous free flap is up to 9.5 cm	Dissection of the lateral circumflex scapular artery should occur in the triangular space at the lateral border of the scapula. This triangle is formed by the teres major, teres minor and the long head of the triceps muscle.
38) Which factor below is part of the extrinsic coagulation pathway? **VII** VIII IX XII	Factor Vll belongs to the extrinsic pathway of coagulation. The other factors mentioned, on the other hand, belong to the intrinsic pathway.
39) Define the minimum distance **a) between two dental implants and** **b) between a dental implant and a tooth** a) 1.5 mm and b) 3 mm a) 3.5 mm and b) 2 mm **a) 3 mm and b) 1.5 mm** a) 3 mm and b) 3 mm	The minimum distance between two implants should not be less than 3 mm. The minimum distance between the dental implant and the tooth should not be less than 1.5 mm. These distances are at least necessary to keep a safe and stable bony scaffold for implantation.
40) Which benign tumor of the parotid glands is highly associated with smoking tobacco? Basal cell adenoma **Cystadenolymphoma (Whartin´s tumor)** Monomorphic adenoma Pleomorphic adenoma	Cystadenolymphoma of the parotid gland is etiologically associated with nicotine use and/or ionizing radiation
41) In a patient with a tumor of 3 x 3 x 3.5 cm in left parotid region associated with ulceration of the skin and facial paralysis, choose the single best answer from the following? Adenoid cystic carcinoma Pleomorphic adenoma **Squamous cell carcinoma** Warthin's tumor	In contrast to the other possible answers, squamous cell carcinoma grows destructively, which is indicated in the question by ulceration of the skin and facial paralysis.
42) Which is true for surgical repair of a lip laceration? A laceration totally within the vermillion (which does not cross onto skin) should allowed to heal by secondary intention to avoid scar induced deformity Because of the potential of contamination by saliva, excision of the wound rims is mandatory Concomitant intra-oral lacerations should be treated after lip repair to minimize the hazard of contamination by saliva **Exact reconstruction of the vermillion line is crucial**	A laceration of the lip in the area of the vermillion line represents an aesthetically demanding wound situation, which can only be appropriately repaired by meticulous reconstruction of the vermillion line.

Question	Rationale
43) A superiorly based platysma flap receives its dominant blood supply from which of the following vessels? Occipital artery **Submental branch of the facial artery** Superior thyroid artery Transverse cervical artery	The superiorly based platysma flap has a reliable arterial blood supply from the submental branch of the facial artery.
44) What is the clinical diagnosis in this case?  Craniofrontonasal dysplasia Hemi-facial microsomia (OAVS) Hemimandibular hypertrophy **Treacher Collins syndrome**	The most common symptoms of Treacher Collins syndrome is downward angled eyelids, underdevelopment of the lower jaw and underdevelopment of the zygomatic bone. which give the cheeks a sunken appearance. The external ear is often malformed, small, and rotated. This syndrome is an inherited condition (autosomal dominant) and also called Franceschetti-Zwahlen-syndrome.
45) The best donor site for harvest of bone to reconstruct a 3.5 cm segmental defect of the mandible after removal of an ameloblastoma would be which of the following? Clavicle Fibula **Iliac crest** Tibia	If a mandibular defect of 3.5 cm is present, bone from the iliac crest due to its perfect fit, especially for the loading with dental implants, is the treatment option of choice.
46) Anastamosis of which pair of vessels provides for in-flow and out-flow for a vascularized fibula flap? Anterior tibial artery and venae commitantes **Peroneal artery and venae commitantes** Popliteal artery and popliteal vein Posterior tibial artery and venae commitantes	Blood supply to the vascularized fibular transplant is through the peroneal artery and venous drainage through its venae commitantes (Vv. peroneae).
47) Regarding bilateral total cleft lip, which statement is true? Surgical treatment of the lip is always undertaken in two separate procedures Surgical treatment of the lip is always complete in a single surgical procedure The reconstruction of the lip should be simultaneous with reconstruction of cleft palate **Two–stage or one-stage closure of the lip may be appropriate, depending on the nature of the cleft**	Current evidence is not conclusive between one and two stage repair https://pubmed.ncbi.nlm.nih.gov/34018417/ https://pubmed.ncbi.nlm.nih.gov/29351180/ A one-stage procedure of bilateral cleft lip offers favorable results in terms of a more symmetrical and smoother lip and nose after primary reconstruction. A two-stage procedure, on the other hand, is a favorable procedure in patients with asymmetric bilateral cleft lip, so the decision of a one-stage or two-stage procedure should be based on the nature of the cleft.

Question	Rationale
48) Which statement is true: Melanoma is a tumour that does not metastasize. **Melanoma may arise from skin or mucosa** Melanoma only affects skin. The use of PET has no diagnostic value for distant disease.	Malignant melanoma is an aggressive tumor of the skin originating from melanocytes. Melanomas form metastases already in early stages, which can metastasize to the lymph nodes, lungs or visceral organs, among others.
49) When treating an anterior open bite, which maxillary movement give the most stable post-operative result? Maxillary advancement Maxillary expansion **Posterior maxillary impaction** Total maxillary impaction	The impaction of the posterior maxilla decisively counteracts the anterior open bite. A total maxillary impaction, on the other hand, would not solve the malocclusion problem.
50) Which is true in terms of temporomandibular alloplastic joint replacement? CAD-CAM manufactured endoprosthesis is currently the only option for alloplastic TMJ reconstruction Metal allergies are of low importance in this field Normal mouth opening can be expected right after surgery **The transplantation of allogenic fat at the same surgery with joint replacement seems to reduce the risk of heterotopic bone formation**	Heterotrophic bone is a pathological formation of bone tissue that can occur in the course of surgical trauma due to activation of the inflammatory system as well as the innate immune system. Scientific evidence has shown that the use of allogeneic fat can counteract this excessive inflammatory and immunological formation of bone in temporomandibular joint alloplastic. Nevertheless, the current literature is limited and further research is needed.

Question	Rationale
1) A 50 year old man is undergoing treatment for a T4aN2bM0 squamous cell carcinoma of the right ventral-lateral tongue. As part of the surgical management a modified radical neck dissection (Comprehensive) is required. **In a type III modified radical neck dissection, what of the following are preserved:** Internal jugular vein Spinal accessory Nerve Spinal accessory and internal jugular vein **Spinal accessory, internal jugular vein and sternocleidomastoid muscle**	Type I MRND: spinal accessory nerve is preserved Type II: spinal accessory nerve and internal jugular vein are preserved Type III: spinal accessory nerve, internal jugular vein and sternocleidomastoid muscle are preserved
2) You are called to the emergency department to assess a patient with suspected panfacial fractures and lowered Glasgow Coma Scale (GCS). By the time of your arrival the patient is already intubated as intracranial bleeding is suspected and the airway deemed unsafe. The patient is showing no signs of injury below the head and neck. Their left eye is proptosed, chemosed, tense and has diffuse subconjunctival haemorrhage. The surrounding skin is grossly swollen with ecchymosis which interferes with your examination. You are unsure if you can elicit a pupil response. What is the first immediate treatment you should perform? Administer mannitol, steroids and/or acetazolamide CT head and facial bones to assess injury Hyperventilate the patient to aim for low normal PaCO2 **Lateral canthotomy and cantholysis**	Orbital compartment syndrome with traumatic visual impairment is a serious complication in patients with midface injuries. Due to a space-occupying intraorbital hematoma, there is an increase in intraorbital pressure with subsequent impairment of perfusion of the retina and the optic nerve. Amaurosis of the affected eye usually results if the intraorbital pressure is not reduced immediately by lateral canthotomy and cantholysis.
3) For a patient awaiting radiotherapy for oral squamous cell carcimona (SCC) which would be the best time to perform dental extractions? 1 week before starting radiotherapy **2 weeks before starting radiotherapy** 1 week after finishing radiotherapy 3 months after finishing radiotherapy	Dental extractions should be performed at least 2 weeks before radiotherapy to give the tissue the chance to start healing and prevent osteonecrosis of the jaw.
4) Select the LEAST stable orthognathic movement Genioplasty **Mandibular set back** Maxillary impaction Maxillary advancement	In order to perform a mandibular set back, a part of the bone has to be cut out in the area of the osteotomy. Therefore, the bone attachment surface is reduced which makes is less stable than the other orthognathic movements. Also the activity of the anterior muscles between the floor of the mouth and the hyoid bone lead to movement in the anterior direction.
5) A negative ANB angle correlates to Retrogenia Class I skeletal relationship Class II skeletal relationship **Class III skeletal relationship**	Class I: 0-4° Class II: >4° Class III: <0°

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6) During a neck dissection you sacrifice the great auricular nerve which supplies sensation to the skin over the angle of the jaw and the ear lobe. Choose the most appropriate origin of this nerve Trigeminal nerve (CN5) C1 and C2 **C2 and C3** C3 and C4	The great auricular nerve originates in the C2 and C3 spinal cord segments.
7) A patient reports that when her skin is exposed to sun, she usually burns, and tans with difficulty. This patient is best classified as a Fitzpatrick skin type: I. **II.** III. IV.	Since the patient has the ability to tan, it is class ll. The Fitzpatrick Skin type I does not have this ability to tan at all.
8) Scar modification using a 60 degree Z-Plasty technique will increase the over length of the laceration by how much? 35% 45% **75%** 95%	When incising the long wound axis, the incisions are made at an angle of 60°, with the lateral legs of the same length as the central axial incision. The triangular skin areas are undermined and sutured to each other in an exchanged manner. For 60° angles, the lengthening corresponds to 75%. The longer the central limb of the Z incision, the longer the lateral incisions must be.
9) Vertical glabellar frown lines are caused by the action of which muscle? **Corrugator** Frontalis Orbicularis Procerus	The musculus corrugator origins from the medial end of the superciliary arches and inserts in the skin above the middle of supraorbital margin. When contracting, it causes vertical wrinkels over the glabella.
10) Horner's syndrome results from damage to which nerve fibers? Parasympathetic fibers to the pupil Oculomotor nerve Optic nerve **Sympathetic fibers to the pupil**	Horner's syndrome is a disorder of the sympathetic part of the nervous system which innervates the pupil of the eyes. It is characterized by the triad ptosis, miosis, (pseudo)enophthalmos.
11) In the classic Millard (Rotation-Advancement) technique for cleft lip repair, the C flap may be utilized for reconstruction of the nostril sill or: for recreating the philtral column on the cleft side. **for lengthening the cleft side columella.** for performing a gingivoperiosteoplasty, may be banked for use at a later date,	When the vertical lip incision and horizontal back cut are carried out, a segment of skin along the base of the columella is created and referred to as the C-flap. This C-flap is a portion of excess skin within the medial superior lip/prolabial area that can be used as part of the nasal sill repair or incorporated into the medial lip segment to create additional length.

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25) Which of the following statements, regarding alveolar osteitis (dry socket), is true? Generally develops 7-10 days after surgery Is a localized bone infection **Is theoretically caused by lysis of a fully formed blood clot prior to its replacement by granulation tissue** Requires vigorous bone scraping under local anesthesia to stimulate new blood clot formation	Dry sockets generally develop 1-3 days after tooth extraction. It is caused by an insufficient primary blood clot or lysis of a full formed blood clot prior to its replacement by granulation tissue. The local infection can cause an ostitis or osteomyelitis.
26) A 37 year old man had his left condylar base fracture plated 8 weeks ago. He returns to clinic with a malocclusion. An OPT taken in clinic showed the fracture site had moved causing shortening of the ramus on the affected side. Which is the best next step? Accept malocclusion and continue conservative management **CT scan of mandible** Inter-maxillary fixation and removal of osteosynthesis plates Redo-ORIF left condylar fracture	In this case, a CT scan of the mandible is necessary to identify the cause of the ramus shortening. For example, this could be resorption, renewed fracture of the bone or osteosynthesis. On basis of the new images, further therapy steps can then be planned.
27) Which muscle of the soft palate opens the pharyngeal end of the Eustachian tube? palatoglossus palatopharyngeus musculus uvulae **tensor veli palatini**	The tensor veli palatini muscle tightens the soft palate and supports the act of swallowing. Its contraction opens the tuba auditiva and thus ensures pressure equalization in the tympanic cavity.

Question	Rationale
28) An adult patient in a fully equipped and staffed theatre has a difficult intubation. The anaesthetist is unable to intubate or ventilate and cannot wake the patient or place a supra-laryngeal device. The first line surgical procedure should be **Emergency cricothyroidotomy** Emergency tracheostomy Jet insufflation Nasal intubation	This is a 'can't intubate, can't ventilate' emergency CICV In order to quickly and safely ventilate the patient, a crico-thyridotomy should be performed. https://das.uk.com/guidelines/cvci.html
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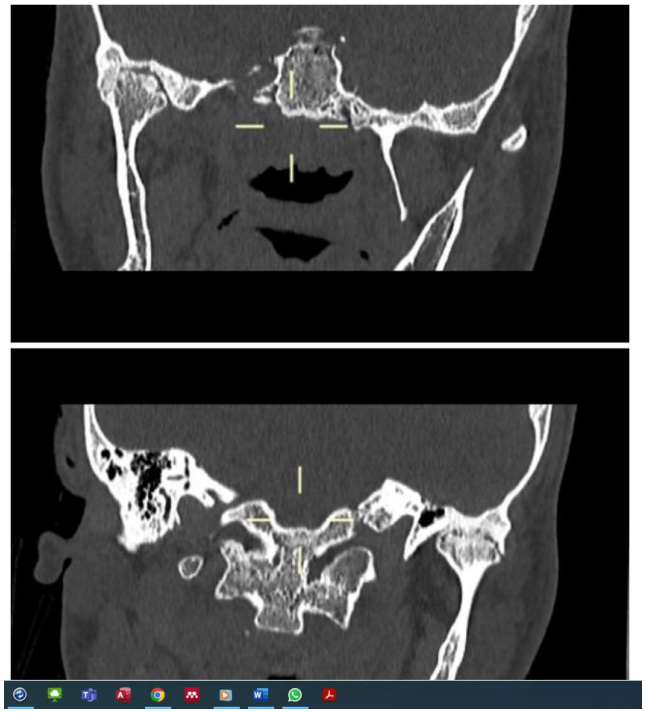
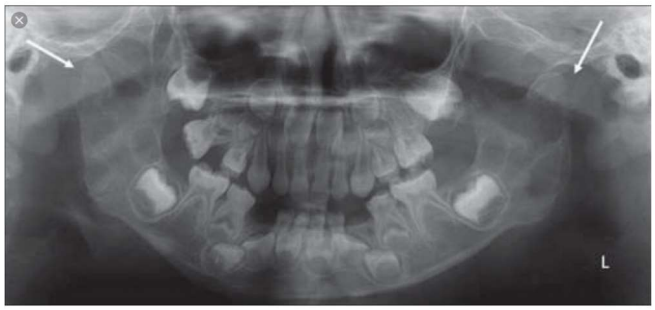
30) This CT belongs to a 46 year patient who has had decreasing jaw movement and decreasing joint pain over the past 18 months. **Choose the treatment option which would NOT be appropriate i.e. the least appropriate for this patient.**  **Diagnostic TMJ arthroscopy** Gap arthroplasty and stock TMJ prosthesis Gap athroplasty and temporalis flap reconstruction Physiotherapy	In the present CT imaging, uneven narrowing of the joint space, subchondral sclerosis, osteophytes, and subchondral nodular cysts can be seen. These definite signs of osteoarthritis do not require further diagnosis by TMJ arthroscopy.

Question	Rationale
31) Which suture is involved in the following image?  Bicoronal Metopic **Saggital** Unicoronal	In case of closure of the sagittal sutura, an asymmetric head growth develops with formation of a scaphocephalus, which can be recognized on the basis of its elongated skull shape in the image.
32) A 10 year old boy presents with the following OPT 1 week after a fall off his bike. He is complaining of difficulty opening his mouth. What is the best management plan?  Inter-maxillary fixation Plating of both fractures (open reduction and internal fixation) Reassess in 1 week for MUA and inter-maxillary fixation **Soft diet and analgesics**	Gentle treatment with a soft diet and analgesia as needed are the means of choice in this clinical picture. Irrespective of the clinical picture, open surgical therapy by plating should be avoided due to the age of the patient and the expected growth.
33) Choose the correct statement regarding the paramedian forehead flap Blood supply is principally from the infratrochlear vessel It is a one stage procedure It is a random pattern flap Pedicle width should be approximately 15mm	The supratrochlear artery is the pedicle of the paramedian forehead flap and therefore the flap is a axial pattern flap. The paramedian forehead flap should be created vertically to include the vertical axial blood supply and can subsequently be used in a two-stage surgical procedure, for example, to reconstruct nasal defects.

Question	Rationale
34) A female, 24 yrs old, patient complains of symptoms from her TMJs bilaterally. On clinical examination presents an anterior open bite and obtuse mandibular angle. Choose the best options from the following treatment options Conservative treatment (soft diet, physiotherapy, medication) **Conservative treatment primarily and surgery & orthodontics secondary** Injection of BoTox A to all muscles of mastication Occlusal splint	This question is about patient with idiopathic condylar resorption. The age, gender and presentation with AoB differentiate it from other TMJ problems. Initial management is conservative but surgery/orthodontics are appropriate when changes have stabilized. Idiopathic condylar resorption: The current understanding in diagnosis and treatment https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5450893/
35) A 65 year old was listed to have a lesion removed from his left cheek **There was noticeable scarring at the site of the lesion with no sign of the lesion on the day of surgery. What is your diagnosis?**  Keratin horn **Keratoacanthoma** Pyogenic granuloma Solar keratosis	The photograph shows a keratoacanthoma with central retraction and erosion. Additionally, the surface is smooth and shows single telangiectasias, which is typical for a keratoacanthoma.
36) As a senior oral and maxillofacial surgery trainee, you are called to the emergency department to see a 32 year old male patient who was stabbed in the posterior triangle of the neck. The Emergency Department team of doctors are in the resuscitation area managing 4 injured and unstable patients after a road traffic collision. Your patient is sitting up with: O2 saturations are 98%, Respiratory Rate 18, Pulse 127, Blood pressure 127/87, Temperature 36.8 **What should YOU do next in the management of this patient?** Explore the laceration **Place 2 large bore cannula and give 2L warm Hartmann's solution** Place chest drain Take for immediate trauma CT scan	Stab wounds carry a high risk of circulation destabilizing bleeding. Therefore, 2 large-bore cannulas should be inserted to stabilize the cardiovascular system by means of 2 l of warm Hartmann's solution in case of hemorrhage.

Question	Rationale
37) In raising a scapula osseocutaneous free flap Identifying the intermuscular septum between Latissimus Dorsi and Teres Major is a key step as it contains the Circumflex Scapular Artery Identifying the Quadrangular Space is key step as it contains Subscapular Artery **Identifying the Triangular space between Teres Major, Teres Minor and the long head of Triceps muscle is a key step as it contains the Circumflex Scapula Artery** The pedicle length for a scapular osseocutaneous free flap is up to 9.5 cm	Dissection of the lateral circumflex scapular artery should occur in the triangular space at the lateral border of the scapula. This triangle is formed by the teres major, teres minor and the long head of the triceps muscle.
38) Which factor below is part of the extrinsic coagulation pathway? **VII** VIII IX XII	Factor Vll belongs to the extrinsic pathway of coagulation. The other factors mentioned, on the other hand, belong to the intrinsic pathway.
39) Define the minimum distance **a) between two dental implants and** **b) between a dental implant and a tooth** a) 1.5 mm and b) 3 mm a) 3.5 mm and b) 2 mm **a) 3 mm and b) 1.5 mm** a) 3 mm and b) 3 mm	The minimum distance between two implants should not be less than 3 mm. The minimum distance between the dental implant and the tooth should not be less than 1.5 mm. These distances are at least necessary to keep a safe and stable bony scaffold for implantation.
40) Which benign tumor of the parotid glands is highly associated with smoking tobacco? Basal cell adenoma **Cystadenolymphoma (Whartin´s tumor)** Monomorphic adenoma Pleomorphic adenoma	Cystadenolymphoma of the parotid gland is etiologically associated with nicotine use and/or ionizing radiation
41) In a patient with a tumor of 3 x 3 x 3.5 cm in left parotid region associated with ulceration of the skin and facial paralysis, choose the single best answer from the following? Adenoid cystic carcinoma Pleomorphic adenoma **Squamous cell carcinoma** Warthin's tumor	In contrast to the other possible answers, squamous cell carcinoma grows destructively, which is indicated in the question by ulceration of the skin and facial paralysis.
42) Which is true for surgical repair of a lip laceration? A laceration totally within the vermillion (which does not cross onto skin) should allowed to heal by secondary intention to avoid scar induced deformity Because of the potential of contamination by saliva, excision of the wound rims is mandatory Concomitant intra-oral lacerations should be treated after lip repair to minimize the hazard of contamination by saliva **Exact reconstruction of the vermillion line is crucial**	A laceration of the lip in the area of the vermillion line represents an aesthetically demanding wound situation, which can only be appropriately repaired by meticulous reconstruction of the vermillion line.

Question	Rationale
43) A superiorly based platysma flap receives its dominant blood supply from which of the following vessels? Occipital artery **Submental branch of the facial artery** Superior thyroid artery Transverse cervical artery	The superiorly based platysma flap has a reliable arterial blood supply from the submental branch of the facial artery.
44) What is the clinical diagnosis in this case?  Craniofrontonasal dysplasia Hemi-facial microsomia (OAVS) Hemimandibular hypertrophy **Treacher Collins syndrome**	The most common symptoms of Treacher Collins syndrome is downward angled eyelids, underdevelopment of the lower jaw and underdevelopment of the zygomatic bone. which give the cheeks a sunken appearance. The external ear is often malformed, small, and rotated. This syndrome is an inherited condition (autosomal dominant) and also called Franceschetti-Zwahlen-syndrome.
45) The best donor site for harvest of bone to reconstruct a 3.5 cm segmental defect of the mandible after removal of an ameloblastoma would be which of the following? Clavicle Fibula **Iliac crest** Tibia	If a mandibular defect of 3.5 cm is present, bone from the iliac crest due to its perfect fit, especially for the loading with dental implants, is the treatment option of choice.
46) Anastamosis of which pair of vessels provides for in-flow and out-flow for a vascularized fibula flap? Anterior tibial artery and venae commitantes **Peroneal artery and venae commitantes** Popliteal artery and popliteal vein Posterior tibial artery and venae commitantes	Blood supply to the vascularized fibular transplant is through the peroneal artery and venous drainage through its venae commitantes (Vv. peroneae).
47) Regarding bilateral total cleft lip, which statement is true? Surgical treatment of the lip is always undertaken in two separate procedures Surgical treatment of the lip is always complete in a single surgical procedure The reconstruction of the lip should be simultaneous with reconstruction of cleft palate **Two–stage or one-stage closure of the lip may be appropriate, depending on the nature of the cleft**	Current evidence is not conclusive between one and two stage repair https://pubmed.ncbi.nlm.nih.gov/34018417/ https://pubmed.ncbi.nlm.nih.gov/29351180/ A one-stage procedure of bilateral cleft lip offers favorable results in terms of a more symmetrical and smoother lip and nose after primary reconstruction. A two-stage procedure, on the other hand, is a favorable procedure in patients with asymmetric bilateral cleft lip, so the decision of a one-stage or two-stage procedure should be based on the nature of the cleft.

Question	Rationale
48) Which statement is true: Melanoma is a tumour that does not metastasize. **Melanoma may arise from skin or mucosa** Melanoma only affects skin. The use of PET has no diagnostic value for distant disease.	Malignant melanoma is an aggressive tumor of the skin originating from melanocytes. Melanomas form metastases already in early stages, which can metastasize to the lymph nodes, lungs or visceral organs, among others.
49) When treating an anterior open bite, which maxillary movement give the most stable post-operative result? Maxillary advancement Maxillary expansion **Posterior maxillary impaction** Total maxillary impaction	The impaction of the posterior maxilla decisively counteracts the anterior open bite. A total maxillary impaction, on the other hand, would not solve the malocclusion problem.
50) Which is true in terms of temporomandibular alloplastic joint replacement? CAD-CAM manufactured endoprosthesis is currently the only option for alloplastic TMJ reconstruction Metal allergies are of low importance in this field Normal mouth opening can be expected right after surgery **The transplantation of allogenic fat at the same surgery with joint replacement seems to reduce the risk of heterotopic bone formation**	Heterotrophic bone is a pathological formation of bone tissue that can occur in the course of surgical trauma due to activation of the inflammatory system as well as the innate immune system. Scientific evidence has shown that the use of allogeneic fat can counteract this excessive inflammatory and immunological formation of bone in temporomandibular joint alloplastic. Nevertheless, the current literature is limited and further research is needed.

Question	Rationale
1) A 50 year old man is undergoing treatment for a T4aN2bM0 squamous cell carcinoma of the right ventral-lateral tongue. As part of the surgical management a modified radical neck dissection (Comprehensive) is required. **In a type III modified radical neck dissection, what of the following are preserved:** Internal jugular vein Spinal accessory Nerve Spinal accessory and internal jugular vein **Spinal accessory, internal jugular vein and sternocleidomastoid muscle**	Type I MRND: spinal accessory nerve is preserved Type II: spinal accessory nerve and internal jugular vein are preserved Type III: spinal accessory nerve, internal jugular vein and sternocleidomastoid muscle are preserved
2) You are called to the emergency department to assess a patient with suspected panfacial fractures and lowered Glasgow Coma Scale (GCS). By the time of your arrival the patient is already intubated as intracranial bleeding is suspected and the airway deemed unsafe. The patient is showing no signs of injury below the head and neck. Their left eye is proptosed, chemosed, tense and has diffuse subconjunctival haemorrhage. The surrounding skin is grossly swollen with ecchymosis which interferes with your examination. You are unsure if you can elicit a pupil response. What is the first immediate treatment you should perform? Administer mannitol, steroids and/or acetazolamide CT head and facial bones to assess injury Hyperventilate the patient to aim for low normal PaCO2 **Lateral canthotomy and cantholysis**	Orbital compartment syndrome with traumatic visual impairment is a serious complication in patients with midface injuries. Due to a space-occupying intraorbital hematoma, there is an increase in intraorbital pressure with subsequent impairment of perfusion of the retina and the optic nerve. Amaurosis of the affected eye usually results if the intraorbital pressure is not reduced immediately by lateral canthotomy and cantholysis.
3) For a patient awaiting radiotherapy for oral squamous cell carcimona (SCC) which would be the best time to perform dental extractions? 1 week before starting radiotherapy **2 weeks before starting radiotherapy** 1 week after finishing radiotherapy 3 months after finishing radiotherapy	Dental extractions should be performed at least 2 weeks before radiotherapy to give the tissue the chance to start healing and prevent osteonecrosis of the jaw.
4) Select the LEAST stable orthognathic movement Genioplasty **Mandibular set back** Maxillary impaction Maxillary advancement	In order to perform a mandibular set back, a part of the bone has to be cut out in the area of the osteotomy. Therefore, the bone attachment surface is reduced which makes is less stable than the other orthognathic movements. Also the activity of the anterior muscles between the floor of the mouth and the hyoid bone lead to movement in the anterior direction.
5) A negative ANB angle correlates to Retrogenia Class I skeletal relationship Class II skeletal relationship **Class III skeletal relationship**	Class I: 0-4° Class II: >4° Class III: <0°

Question	Rationale
6) During a neck dissection you sacrifice the great auricular nerve which supplies sensation to the skin over the angle of the jaw and the ear lobe. Choose the most appropriate origin of this nerve Trigeminal nerve (CN5) C1 and C2 **C2 and C3** C3 and C4	The great auricular nerve originates in the C2 and C3 spinal cord segments.
7) A patient reports that when her skin is exposed to sun, she usually burns, and tans with difficulty. This patient is best classified as a Fitzpatrick skin type: I. **II.** III. IV.	Since the patient has the ability to tan, it is class ll. The Fitzpatrick Skin type I does not have this ability to tan at all.
8) Scar modification using a 60 degree Z-Plasty technique will increase the over length of the laceration by how much? 35% 45% **75%** 95%	When incising the long wound axis, the incisions are made at an angle of 60°, with the lateral legs of the same length as the central axial incision. The triangular skin areas are undermined and sutured to each other in an exchanged manner. For 60° angles, the lengthening corresponds to 75%. The longer the central limb of the Z incision, the longer the lateral incisions must be.
9) Vertical glabellar frown lines are caused by the action of which muscle? **Corrugator** Frontalis Orbicularis Procerus	The musculus corrugator origins from the medial end of the superciliary arches and inserts in the skin above the middle of supraorbital margin. When contracting, it causes vertical wrinkels over the glabella.
10) Horner's syndrome results from damage to which nerve fibers? Parasympathetic fibers to the pupil Oculomotor nerve Optic nerve **Sympathetic fibers to the pupil**	Horner's syndrome is a disorder of the sympathetic part of the nervous system which innervates the pupil of the eyes. It is characterized by the triad ptosis, miosis, (pseudo)enophthalmos.
11) In the classic Millard (Rotation-Advancement) technique for cleft lip repair, the C flap may be utilized for reconstruction of the nostril sill or: for recreating the philtral column on the cleft side. **for lengthening the cleft side columella.** for performing a gingivoperiosteoplasty, may be banked for use at a later date,	When the vertical lip incision and horizontal back cut are carried out, a segment of skin along the base of the columella is created and referred to as the C-flap. This C-flap is a portion of excess skin within the medial superior lip/prolabial area that can be used as part of the nasal sill repair or incorporated into the medial lip segment to create additional length.

Question	Rationale
12) In a Floor of Mouth Squamous Cell Carcinoma in a 65 year old man the best investigation to delineate bony invasion is MRI **CT** OPG Bone scan	CT imaging is the adequate choice for evaluating bone invasion because it can best and most accurately visualize the bone. CT imaging is additionally superior to conventional radiographic imaging due to its three-dimensional imaging. MRI is primary indicated to evaluate the soft tissue.
13) You are reviewing a patient one month following surgical removal of their lower wisdom teeth. Their only complaint is of significant loss of sensation of the right side of the tongue, with some disturbance of taste. There has been minimal improvement in the last week. This is best managed by **arranging further follow up in another two months.** discharge of patient with apologies for the recognised complication and advise about avoiding injury to the tongue. exploration of the surgical site under local anaesthesia. immediate admission and exploration of the surgical site, with possible nerve repair.	In case of clinical indications of an incipient regeneration of sensibility, such as tingling and transition from anesthesia to hypesthesia, there is no indication for surgical intervention after one month. A further, usually complete, return of function can be expected in the next few months, but should be continuously monitored neurologically - also for forensic reasons.
14) If the lingual alveolar plate is fractured and mobile during removal of an erupted mandibular third molar, the fractured segment should be: **left in place with minimal manipulation.** stabilized to avoid damage to the lingual nerve. removed with careful subperiosteal dissection. removed and the lingual nerve explored for evidence of injury.	Removal of a mobile alveolar bone plate increases the risk of damage to the lingual nerve. Therefore, the lingual alveolar bone plate should be moved as little as possible and left in place.
15) Which of the following is the most common source of venous bleeding during maxillary osteotomy at the LeFort I level? Descending palatine veins Facial vein Laceration of the pterygoid musculature **Pterygoid venous plexus**	The pterygoid venous plexus is a venous plexus in the infratemporal fossa. It receives inflow from the sphenopalatine vein, the inferior ophthalmic vein, the inferior alveolar vein, the temporal veins, and the venae temporales profundae. The outflows drain directly or indirectly into the maxillary vein, to the retromandibular vein. This can lead to significant venous bleeding if injured during a maxillary osteotomy at the LeFort I level.
16) A 16-year-old female patient undergoes a Le Fort I osteotomy for maxillary impaction. Two days after surgery, guiding elastics are removed and assessment of the patient's occlusion reveals an anterior open bite. What is the most likely cause of this complication? Failure of maxillary hardware Incomplete down fracture of the maxilla during surgery **Incomplete seating of the condyles during surgery** Severe condylar resorption associated with fixation	Incomplete seating of the condyles during surgery (elastics distracting the condylar heads from the glenoid fossa) is the most common cause of an anterior open bite after bimaxillary surgery. This operative error can be disguised by post-operative elastics which hold the occlusion but distract the condyles. It is important, when the IMF is released at the end of the operation that the occlusion is checked with the condyles guided into the fossa.

Question	Rationale
17) What is the minimum amount of time a parotid stent be kept in place after a ductal repair? **2-4 weeks** 6-8 weeks 10-12 weeks 16-18 weeks	To prevent a stenosis after ductal repair, the stent needs to be left in place at least 2-4 weeks to give the tissue enough time to heal.
18) The best reconstruction of a lower lip defect more than 2/3 of the lip is Abbe flap Johansen step ladder **Karapandzic flap** Primary closure	Larger defects that are one-third to two-thirds of the width of the lower lip can be closed with the Karapandzic flap. If the commissure is involved, both the Karapandzic and Estlander flaps can be used; however, the Karapandzic flap is the better choice because it is better at maintaining oral competence.
19) Following repair of pan-facial fractures, a patient develops diplopia, orbital proptosis, and reports an unusual buzzing sound. What is the most likely diagnosis? **Carotid-cavernous fistula** Cavernous sinus thrombosis Orbital apex syndrome Temporal arteritis	Traumatic sinus cavernous fistula results in flow-related ear noise, pulsatile exophthalmos, diplopia, and compression-related loss of cranial nerves (III, IV, VI) passing through the sinus cavernous wall, among other symptoms.
20) In the unrepaired cleft palate, the levator veli palatini muscle inserts abnormally into: lateral pterygoid plate. medial pterygoid plate Passavant's ridge. **posterior hard palate.**	The levator veli palatini muscle inserts at the palatine aponeurosis. As in an unrepaired cleft palate, the palatine aponeurosis is missing, the muscle inserts abnormally into the posterior hard plate.
21) Which of the following is more characteristic of a thin split-thickness skin graft (STSG) when compared to a thick STSG? Decreased secondary contracture of the graft **Increased probability of graft survival** More likely to result in recipient site hair growth Slower donor site re-epithelialization	The nutrition of an STSG is only by diffusion of oxygen nutrient fluids. Therefore, thinner STSGs have an increased probability of graft survival compared to thicker STSGs.
22) Low-grade mucoepidermoid carcinoma of the posterior mandible with no perforation of the bone and no lymphadenopathy is best treated by which of the following protocols? Radiation followed by chemotherapy **Resective surgery alone** Resective surgery and post-surgical chemotherapy Resective surgery and post-surgical radiation	Surgical treatment alone of low-grade mucoepidermoid carcinoma is the standard of care.

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23) A 48-year-old woman presents with a history of metastatic breast carcinoma, previous mastectomy, and radiation to the chest. She continues periodic chemotherapy infusions for control of her disease. Her general dentist extracted lower right first molar and has now referred the patient to you for a non-healing socket and bone exposure in the area. The most likely cause of the non-healing site is: **bisphosphonates included in the chemotherapy regimen.** failure to attain primary closure at the time of extraction. osteoradionecrosis secondary to the radiation therapy. traumatic extraction with failure of the patient to follow instructed home care.	Bisphosphonate therapy may reduce osseous recurrence and pain. It prolongs cancer-specific survival in women with early breast cancer. In a period of up to 10 years after receiving therapy, there is an increased risk of drug-associated osteonecrosis of the jaw after tooth extractions.
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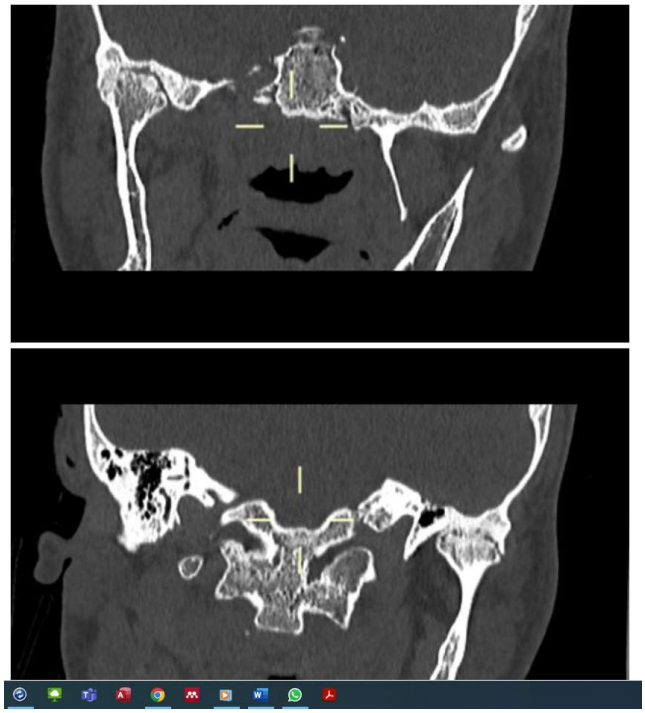
30) This CT belongs to a 46 year patient who has had decreasing jaw movement and decreasing joint pain over the past 18 months. **Choose the treatment option which would NOT be appropriate i.e. the least appropriate for this patient.**  **Diagnostic TMJ arthroscopy** Gap arthroplasty and stock TMJ prosthesis Gap athroplasty and temporalis flap reconstruction Physiotherapy	In the present CT imaging, uneven narrowing of the joint space, subchondral sclerosis, osteophytes, and subchondral nodular cysts can be seen. These definite signs of osteoarthritis do not require further diagnosis by TMJ arthroscopy.

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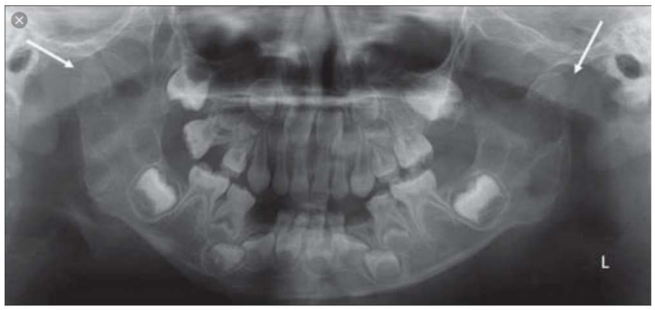
32) A 10 year old boy presents with the following OPT 1 week after a fall off his bike. He is complaining of difficulty opening his mouth. What is the best management plan?  Inter-maxillary fixation Plating of both fractures (open reduction and internal fixation) Reassess in 1 week for MUA and inter-maxillary fixation **Soft diet and analgesics**	Gentle treatment with a soft diet and analgesia as needed are the means of choice in this clinical picture. Irrespective of the clinical picture, open surgical therapy by plating should be avoided due to the age of the patient and the expected growth.
33) Choose the correct statement regarding the paramedian forehead flap Blood supply is principally from the infratrochlear vessel It is a one stage procedure It is a random pattern flap Pedicle width should be approximately 15mm	The supratrochlear artery is the pedicle of the paramedian forehead flap and therefore the flap is a axial pattern flap. The paramedian forehead flap should be created vertically to include the vertical axial blood supply and can subsequently be used in a two-stage surgical procedure, for example, to reconstruct nasal defects.

Question	Rationale
34) A female, 24 yrs old, patient complains of symptoms from her TMJs bilaterally. On clinical examination presents an anterior open bite and obtuse mandibular angle. Choose the best options from the following treatment options Conservative treatment (soft diet, physiotherapy, medication) **Conservative treatment primarily and surgery & orthodontics secondary** Injection of BoTox A to all muscles of mastication Occlusal splint	This question is about patient with idiopathic condylar resorption. The age, gender and presentation with AoB differentiate it from other TMJ problems. Initial management is conservative but surgery/orthodontics are appropriate when changes have stabilized. Idiopathic condylar resorption: The current understanding in diagnosis and treatment https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5450893/
35) A 65 year old was listed to have a lesion removed from his left cheek **There was noticeable scarring at the site of the lesion with no sign of the lesion on the day of surgery. What is your diagnosis?**  Keratin horn **Keratoacanthoma** Pyogenic granuloma Solar keratosis	The photograph shows a keratoacanthoma with central retraction and erosion. Additionally, the surface is smooth and shows single telangiectasias, which is typical for a keratoacanthoma.
36) As a senior oral and maxillofacial surgery trainee, you are called to the emergency department to see a 32 year old male patient who was stabbed in the posterior triangle of the neck. The Emergency Department team of doctors are in the resuscitation area managing 4 injured and unstable patients after a road traffic collision. Your patient is sitting up with: O2 saturations are 98%, Respiratory Rate 18, Pulse 127, Blood pressure 127/87, Temperature 36.8 **What should YOU do next in the management of this patient?** Explore the laceration **Place 2 large bore cannula and give 2L warm Hartmann's solution** Place chest drain Take for immediate trauma CT scan	Stab wounds carry a high risk of circulation destabilizing bleeding. Therefore, 2 large-bore cannulas should be inserted to stabilize the cardiovascular system by means of 2 l of warm Hartmann's solution in case of hemorrhage.

Question	Rationale
37) In raising a scapula osseocutaneous free flap Identifying the intermuscular septum between Latissimus Dorsi and Teres Major is a key step as it contains the Circumflex Scapular Artery Identifying the Quadrangular Space is key step as it contains Subscapular Artery **Identifying the Triangular space between Teres Major, Teres Minor and the long head of Triceps muscle is a key step as it contains the Circumflex Scapula Artery** The pedicle length for a scapular osseocutaneous free flap is up to 9.5 cm	Dissection of the lateral circumflex scapular artery should occur in the triangular space at the lateral border of the scapula. This triangle is formed by the teres major, teres minor and the long head of the triceps muscle.
38) Which factor below is part of the extrinsic coagulation pathway? **VII** VIII IX XII	Factor Vll belongs to the extrinsic pathway of coagulation. The other factors mentioned, on the other hand, belong to the intrinsic pathway.
39) Define the minimum distance **a) between two dental implants and** **b) between a dental implant and a tooth** a) 1.5 mm and b) 3 mm a) 3.5 mm and b) 2 mm **a) 3 mm and b) 1.5 mm** a) 3 mm and b) 3 mm	The minimum distance between two implants should not be less than 3 mm. The minimum distance between the dental implant and the tooth should not be less than 1.5 mm. These distances are at least necessary to keep a safe and stable bony scaffold for implantation.
40) Which benign tumor of the parotid glands is highly associated with smoking tobacco? Basal cell adenoma **Cystadenolymphoma (Whartin´s tumor)** Monomorphic adenoma Pleomorphic adenoma	Cystadenolymphoma of the parotid gland is etiologically associated with nicotine use and/or ionizing radiation
41) In a patient with a tumor of 3 x 3 x 3.5 cm in left parotid region associated with ulceration of the skin and facial paralysis, choose the single best answer from the following? Adenoid cystic carcinoma Pleomorphic adenoma **Squamous cell carcinoma** Warthin's tumor	In contrast to the other possible answers, squamous cell carcinoma grows destructively, which is indicated in the question by ulceration of the skin and facial paralysis.
42) Which is true for surgical repair of a lip laceration? A laceration totally within the vermillion (which does not cross onto skin) should allowed to heal by secondary intention to avoid scar induced deformity Because of the potential of contamination by saliva, excision of the wound rims is mandatory Concomitant intra-oral lacerations should be treated after lip repair to minimize the hazard of contamination by saliva **Exact reconstruction of the vermillion line is crucial**	A laceration of the lip in the area of the vermillion line represents an aesthetically demanding wound situation, which can only be appropriately repaired by meticulous reconstruction of the vermillion line.

Question	Rationale
43) A superiorly based platysma flap receives its dominant blood supply from which of the following vessels? Occipital artery **Submental branch of the facial artery** Superior thyroid artery Transverse cervical artery	The superiorly based platysma flap has a reliable arterial blood supply from the submental branch of the facial artery.
44) What is the clinical diagnosis in this case?  Craniofrontonasal dysplasia Hemi-facial microsomia (OAVS) Hemimandibular hypertrophy **Treacher Collins syndrome**	The most common symptoms of Treacher Collins syndrome is downward angled eyelids, underdevelopment of the lower jaw and underdevelopment of the zygomatic bone. which give the cheeks a sunken appearance. The external ear is often malformed, small, and rotated. This syndrome is an inherited condition (autosomal dominant) and also called Franceschetti-Zwahlen-syndrome.
45) The best donor site for harvest of bone to reconstruct a 3.5 cm segmental defect of the mandible after removal of an ameloblastoma would be which of the following? Clavicle Fibula **Iliac crest** Tibia	If a mandibular defect of 3.5 cm is present, bone from the iliac crest due to its perfect fit, especially for the loading with dental implants, is the treatment option of choice.
46) Anastamosis of which pair of vessels provides for in-flow and out-flow for a vascularized fibula flap? Anterior tibial artery and venae commitantes **Peroneal artery and venae commitantes** Popliteal artery and popliteal vein Posterior tibial artery and venae commitantes	Blood supply to the vascularized fibular transplant is through the peroneal artery and venous drainage through its venae commitantes (Vv. peroneae).
47) Regarding bilateral total cleft lip, which statement is true? Surgical treatment of the lip is always undertaken in two separate procedures Surgical treatment of the lip is always complete in a single surgical procedure The reconstruction of the lip should be simultaneous with reconstruction of cleft palate **Two–stage or one-stage closure of the lip may be appropriate, depending on the nature of the cleft**	Current evidence is not conclusive between one and two stage repair https://pubmed.ncbi.nlm.nih.gov/34018417/ https://pubmed.ncbi.nlm.nih.gov/29351180/ A one-stage procedure of bilateral cleft lip offers favorable results in terms of a more symmetrical and smoother lip and nose after primary reconstruction. A two-stage procedure, on the other hand, is a favorable procedure in patients with asymmetric bilateral cleft lip, so the decision of a one-stage or two-stage procedure should be based on the nature of the cleft.

Question	Rationale
48) Which statement is true: Melanoma is a tumour that does not metastasize. **Melanoma may arise from skin or mucosa** Melanoma only affects skin. The use of PET has no diagnostic value for distant disease.	Malignant melanoma is an aggressive tumor of the skin originating from melanocytes. Melanomas form metastases already in early stages, which can metastasize to the lymph nodes, lungs or visceral organs, among others.
49) When treating an anterior open bite, which maxillary movement give the most stable post-operative result? Maxillary advancement Maxillary expansion **Posterior maxillary impaction** Total maxillary impaction	The impaction of the posterior maxilla decisively counteracts the anterior open bite. A total maxillary impaction, on the other hand, would not solve the malocclusion problem.
50) Which is true in terms of temporomandibular alloplastic joint replacement? CAD-CAM manufactured endoprosthesis is currently the only option for alloplastic TMJ reconstruction Metal allergies are of low importance in this field Normal mouth opening can be expected right after surgery **The transplantation of allogenic fat at the same surgery with joint replacement seems to reduce the risk of heterotopic bone formation**	Heterotrophic bone is a pathological formation of bone tissue that can occur in the course of surgical trauma due to activation of the inflammatory system as well as the innate immune system. Scientific evidence has shown that the use of allogeneic fat can counteract this excessive inflammatory and immunological formation of bone in temporomandibular joint alloplastic. Nevertheless, the current literature is limited and further research is needed.