

ONCOLOGY KNOWLEDGE HUB · MCQ BOOKLET

Head & Neck Cancer

116 questions in three levels, with answer key

For NEET-PG, USMLE, DNB and DM revision and for classroom tests. Level 1 covers core facts; Level 2 tests applied reasoning (calculations, imaging and fluid findings, trial interpretation, sequencing); Level 3 covers landmark trials and newer therapies. Answers and explanations are at the end. No drug doses.

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drharitha.co.in/professionals/head-neck-mcq

Level 1 · Basics

- Q1. Oral** Which is the commonest cancer among men in India (GLOBOCAN 2022)?
- A Stomach cancer
 - B Lung cancer
 - C Prostate cancer
 - D Colorectal cancer
 - E Lip and oral cavity cancer
- Q2. Oral** Which habit is the main cause of buccal mucosa cancer in India?
- A Chewing tobacco and areca nut (gutka, khaini, pan)
 - B Spicy food
 - C Mobile phone use
 - D Drinking hot tea
 - E Using toothpowder
- Q3. Oral** Which oral lesion carries the highest risk of malignant change?
- A Erythroplakia
 - B Fordyce spots
 - C Linea alba
 - D Homogeneous leukoplakia
 - E Geographic tongue
- Q4. Oral** Progressive trismus with blanched, stiff buccal mucosa in an areca nut chewer suggests:
- A Oral submucous fibrosis
 - B Temporomandibular joint dislocation
 - C Candidiasis
 - D Tetanus
 - E Lichen planus
- Q5. Oral** A mouth ulcer persists 2 weeks after a sharp tooth was smoothed. What next?
- A Antituberculous treatment
 - B Review in 6 months
 - C Another course of antibiotics
 - D Topical steroid for a month
 - E Biopsy the ulcer
- Q6. Oral** A 58-year-old gutka user has the tongue lesion shown (schematic). What is the most likely diagnosis of the right-sided lesion?
- A Aphthous ulcer
 - B Squamous cell carcinoma
 - C Geographic tongue
 - D Traumatic ulcer that needs no biopsy
 - E Herpetic ulcer
- Q7. Oral** In the AJCC 8th edition, which feature was added to the oral cavity T category?
- A Perineural invasion
 - B Grade
 - C Depth of invasion
 - D Tumour thickness
 - E HPV status
- Q8. Oral** An oral tongue cancer measures 1.8 cm with DOI 7 mm. What is its T category?
- A T3
 - B T4a
 - C T1
 - D T2
 - E Tis

- Q9. Oral** What is the preferred primary treatment for a resectable early oral cavity cancer?
- A Chemotherapy alone
 - B Observation
 - C Immunotherapy
 - D Definitive radiotherapy
 - E Surgery
- Q10. Oral** Which mandibular operation is needed when tumour invades the medullary bone?
- A No bone resection
 - B Segmental mandibulectomy
 - C Alveolectomy only
 - D Coronoidectomy
 - E Marginal mandibulectomy
- Q11. Oral** Which free flap is the commonest choice to reconstruct a segmental mandible defect?
- A Latissimus dorsi
 - B Fibula
 - C Rectus abdominis
 - D Radial forearm (soft tissue only)
 - E Temporalis
- Q12. Oropharynx** Which subsite is part of the oropharynx?
- A Anterior two-thirds of tongue
 - B Piriform sinus
 - C Hard palate
 - D Base of tongue
 - E Vocal cord
- Q13. Oropharynx** Which virus causes most tonsil and base-of-tongue cancers in high-income countries?
- A HPV type 16
 - B CMV
 - C EBV
 - D HSV-1
 - E Hepatitis C
- Q14. Oropharynx** Which test is the standard surrogate for HPV in oropharyngeal cancer?
- A EGFR IHC
 - B Ki-67
 - C p16 immunohistochemistry
 - D Serum SCC antigen
 - E PD-L1 TPS
- Q15. Oropharynx** The oropharyngeal tumour shows this staining pattern on p16 IHC (schematic). How is it interpreted?
- A Lymphoma
 - B p16-positive: HPV-associated, staged with the HPV table
 - C p16-negative
 - D Non-diagnostic
 - E Melanoma
- Q16. Oropharynx** A 44-year-old non-smoker has a painless cystic lump at level II (CT schematic). What is the most likely diagnosis?
- A Tuberculous lymphadenitis
 - B Metastatic HPV-associated oropharyngeal squamous carcinoma
 - C Lipoma
 - D Thyroglossal cyst
 - E Branchial cyst

- Q17. Oropharynx** Compared with HPV-negative disease, HPV-associated oropharyngeal cancer has:
- A Worse survival
 - B More bone invasion
 - C Better survival
 - D Identical survival
 - E More second primaries
- Q18. Larynx** Which symptom typically brings glottic cancer to attention early?
- A Haemoptysis
 - B Stridor
 - C Otalgia
 - D Hoarseness
 - E Neck mass
- Q19. Larynx** Hoarseness for 4 weeks in a 60-year-old smoker. What should be done?
- A Antibiotics and review in a month
 - B Voice rest only
 - C Laryngoscopy
 - D Chest X-ray only
 - E Steroid inhaler
- Q20. Larynx** Why is elective neck treatment not needed for T1–T2 glottic cancer?
- A Radiotherapy cannot treat the neck
 - B Neck dissection is dangerous
 - C The neck is always involved
 - D The true cords have sparse lymphatics, so nodal spread is rare
 - E It is midline
- Q21. Larynx** Which site tends to present late with nodal disease and a poor prognosis?
- A Lip
 - B Glottis
 - C Hypopharynx (pyriform sinus)
 - D Lower gingiva
 - E Hard palate
- Q22. Larynx** A laryngoscopy schematic is shown. What is the stage if the lesion is limited to one mobile cord and CT is normal?
- A T1a NO (stage I)
 - B T4a NO
 - C T1b NO
 - D T3 NO
 - E T2 NO
- Q23. Larynx** Which operation is used for a T4a larynx cancer with thyroid cartilage destruction?
- A Laser cordectomy
 - B Supraglottic laryngectomy only
 - C Tonsillectomy
 - D Tracheostomy alone
 - E Total laryngectomy with neck dissection
- Q24. Recurrent** Which histology accounts for more than 90% of head and neck cancers?
- A Lymphoma
 - B Melanoma
 - C Adenocarcinoma
 - D Squamous cell carcinoma
 - E Sarcoma

- Q25. Recurrent** What is the first test for a hard neck node in an adult tobacco user?
- A Ultrasound only
 - B Antituberculous trial
 - C Serum ADA
 - D Fine-needle aspiration cytology
 - E Excision biopsy of the node
- Q26. Recurrent** When should PET-CT be done to assess response after chemoradiation?
- A About 12 weeks after completion
 - B 1 week after completion
 - C During week 4 of RT
 - D Never
 - E 1 year after completion
- Q27. Recurrent** Which drug is the standard radiosensitiser in head and neck chemoradiation?
- A Cisplatin
 - B Methotrexate
 - C Cetuximab
 - D Paclitaxel
 - E Gemcitabine
- Q28. Recurrent** Within how many weeks of surgery should postoperative RT ideally start?
- A 3 months
 - B 6 weeks
 - C 12 weeks
 - D There is no time limit
 - E 6 months
- Q29. Recurrent** How often should TSH be checked after radiotherapy to the neck?
- A Once at 5 years
 - B Only if symptomatic
 - C Every 6–12 months
 - D Every 5 years
 - E Weekly
- Q30. Recurrent** What is the main trigger for osteoradionecrosis of the mandible?
- A Dental extraction in irradiated bone
 - B Fluoride use
 - C Chewing gum
 - D Brushing teeth
 - E Wearing a mouth guard
- Q31. Recurrent** Which immune checkpoint inhibitor improved survival in platinum-refractory head and neck cancer in CheckMate 141?
- A Ipilimumab alone
 - B Avelumab
 - C Durvalumab
 - D Atezolizumab
 - E Nivolumab
- Q32. Recurrent** Which biomarker decides first-line pembrolizumab in recurrent/metastatic head and neck cancer?
- A EGFR expression
 - B HER2
 - C PD-L1 combined positive score (CPS)
 - D TMB
 - E p53

- Q33. Recurrent** What proportion of recurrences of head and neck cancer appear within the first 2–3 years?
- A About 50%
 - B About 10%
 - C About 80–90%
 - D About 30%
 - E Almost none
- Q34. Recurrent** Which screening is advised for a head and neck cancer survivor with a 30 pack-year history?
- A Monthly chest X-ray
 - B Yearly low-dose chest CT
 - C No screening
 - D Yearly PET-CT
 - E Serum SCC antigen
- Q35. Oropharynx** Which HPV protein targets p53 for degradation?
- A E7
 - B E5
 - C E6
 - D L1
 - E E2
- Q36. Oropharynx** Why is p16 over-expressed in HPV-associated cancer?
- A E7 inactivates Rb, removing feedback that normally limits p16
 - B p16 is a viral protein
 - C E6 activates p16 directly
 - D CDKN2A is amplified
 - E Tobacco induces p16
- Q37. Nasopharynx** An adult has unilateral serous otitis media and a level V neck node. What must be examined?
- A The larynx only
 - B The oral tongue only
 - C Nothing; treat with antibiotics
 - D The thyroid only
 - E The nasopharynx, with a flexible nasoendoscope
- Q38. Nasopharynx** Which virus is linked with most non-keratinising nasopharyngeal carcinomas?
- A HTLV-1
 - B HIV
 - C Hepatitis B
 - D HPV-16
 - E Epstein-Barr virus
- Q39. Nasopharynx** Which imaging test best defines local extent of nasopharyngeal carcinoma?
- A Barium swallow
 - B Ultrasound of the neck
 - C Plain X-ray of the skull
 - D MRI of the nasopharynx, skull base and neck
 - E Bone scan

Level 2 · Applied & innovative

- Q40. Oral** A 46-year-old has a 1.8 cm lateral tongue SCC with DOI 4 mm and a clinically negative neck. Best management of the neck?
- A PET-CT and observe
 - B Elective selective neck dissection (or SLNB in an expert centre)
 - C Radical neck dissection
 - D Neck RT alone
 - E Observation

- Q41. Oral** In the Tata Memorial trial of elective vs therapeutic neck dissection, 3-year overall survival was:
- A 80% vs 67.5%
 - B 67.5% vs 80%
 - C 50% vs 50%
 - D 95% vs 60%
 - E 90% vs 89%
- Q42. Oral** In Senti-MERORL, sentinel node biopsy compared with elective neck dissection gave:
- A Higher neck recurrence
 - B Worse survival
 - C Similar neck control and survival with less shoulder morbidity
 - D Better survival
 - E More complications
- Q43. Oral** After partial glossectomy for T1 cancer the deep margin is 1.5 mm. Next step?
- A Immunotherapy
 - B Re-excision of the margin
 - C Neck dissection only
 - D Observation
 - E Chemoradiation
- Q44. Oral** After resection of oral cancer, pathology shows clear margins, 2 positive nodes without ENE and perineural invasion. Adjuvant therapy?
- A Adjuvant chemotherapy alone
 - B Cetuximab with RT
 - C Postoperative chemoradiation
 - D Postoperative RT alone
 - E Observation
- Q45. Oral** After resection, the neck node shows extranodal extension. Standard adjuvant therapy for a cisplatin-fit patient?
- A RT alone
 - B Adjuvant docetaxel alone
 - C Cetuximab alone
 - D RT with concurrent cisplatin
 - E Observation
- Q46. Oral** A 60-year-old edentulous man has a lower alveolar SCC with minimal cortical erosion on CT. Which bone operation is usually needed?
- A Segmental mandibulectomy
 - B Marginal mandibulectomy
 - C No bone resection
 - D Curettage
 - E Coronoideotomy
- Q47. Oral** Why is a free flap recommended for most buccal mucosa resections?
- A To avoid neck dissection
 - B To hide recurrence
 - C To reline the cheek and prevent severe trismus
 - D Because skin grafts are illegal
 - E To shorten surgery
- Q48. Oral** What does depth of invasion measure?
- A From the tumour surface to its base
 - B Thickness of the keratin layer
 - C From the basement membrane of adjacent normal mucosa to the deepest tumour
 - D Distance to the margin
 - E The width of the ulcer

Q49. Oral In the Kerala trial, three rounds of visual oral screening reduced oral cancer mortality among tobacco or alcohol users by about:

- A 2%
- B 29%
- C 50%
- D 0%
- E 75%

Q50. Oral A cT4aN2b oral cancer is resectable and PD-L1 CPS is 15. Which strategy improved event-free survival in a randomised trial?

- A Neoadjuvant RT alone
- B Postoperative avelumab
- C Neoadjuvant and adjuvant pembrolizumab with standard surgery and RT
- D Induction cetuximab
- E Adjuvant methotrexate

Q51. Oropharynx Why is HPV status not used to reduce treatment outside trials?

- A HPV-positive cancers are more aggressive
- B Replacing cisplatin with cetuximab in HPV-positive disease worsened survival
- C There are no trials
- D HPV status is unreliable
- E Cisplatin does not work in HPV disease

Q52. Oropharynx An HPV-associated tonsil cancer is 1.5 cm with one ipsilateral 2.8 cm node. AJCC 8th stage?

- A Stage IVB
- B Stage III
- C Stage I
- D Stage II
- E Stage IVA

Q53. Oropharynx Same tumour, but the patient is p16-negative. Stage?

- A Stage III
- B Stage II
- C Stage IVB
- D Stage I
- E Stage IVA

Q54. Oropharynx A tumour is p16-positive but HPV DNA-negative. How does it behave?

- A Like lymphoma
- B Better than double-positive
- C Close to HPV-negative disease
- D Same as double-positive
- E Like nasopharyngeal cancer

Q55. Oropharynx What was the main finding of ORATOR (RT vs TORS + neck dissection for early oropharynx cancer)?

- A TORS avoided all adjuvant therapy
- B TORS improved survival
- C No patient needed a feeding tube
- D RT caused more deaths
- E Swallowing quality of life at 1 year was slightly better with RT, below the clinically meaningful threshold

Q56. Oropharynx A heavy smoker (40 pack-years) has p16-positive oropharyngeal cancer. What does smoking do to prognosis?

- A It only affects stage
- B It worsens it towards HPV-negative outcomes
- C It makes it nasopharyngeal
- D It improves it
- E No effect

- Q57. Oropharynx** Squamous cancer in a level II node with no primary on examination. Best order of investigation?
- A Panendoscopy, then PET-CT a week later
 - B PET-CT, then panendoscopy with bilateral tonsillectomy and directed biopsies
 - C Chemotherapy and observe
 - D Excision biopsy of the node
 - E Neck dissection first
- Q58. Oropharynx** After chemoradiation for N2b disease, 12-week PET-CT shows complete metabolic response but a 1 cm residual node on CT. Management?
- A Immediate neck dissection
 - B Chemotherapy
 - C Open biopsy
 - D Re-irradiation
 - E Observation with surveillance
- Q59. Larynx** In RTOG 91-11, which arm had the best locoregional control?
- A RT alone
 - B Induction PF then RT
 - C Total laryngectomy
 - D Concurrent cisplatin-RT
 - E Cetuximab-RT
- Q60. Larynx** In the VA larynx trial, what proportion of patients kept their larynx after induction chemotherapy then RT?
- A None
 - B All patients
 - C About 10%
 - D About 64%
 - E About 30%
- Q61. Larynx** A T1a glottic cancer in a 63-year-old. Which is an appropriate option?
- A Neck dissection and observe the larynx
 - B Chemoradiation with elective neck
 - C Small-field RT or transoral laser cordectomy
 - D Total laryngectomy
 - E Palliative care
- Q62. Larynx** Which supraglottic T2N0 plan is correct?
- A Treat the primary with RT or transoral surgery plus bilateral elective neck (II–IV)
 - B Chemotherapy alone
 - C Total laryngectomy
 - D Treat the primary only
 - E Ipsilateral neck only
- Q63. Larynx** After TPF induction for larynx preservation, why avoid bolus high-dose cisplatin with RT?
- A It is too cheap
 - B It causes hypothyroidism
 - C Severe toxicity rises sharply after cisplatin-based induction
 - D It reduces larynx preservation
 - E It is ineffective
- Q64. Larynx** A man has had a total laryngectomy. Which option restores speech best for most patients?
- A Sign language only
 - B Vocal cord injection
 - C Tracheo-oesophageal puncture with voice prosthesis
 - D Tracheostomy speaking valve
 - E Cochlear implant

- Q65. Recurrent** Why is radiotherapy alone usually chosen for a fit 76-year-old with stage III oropharyngeal cancer?
- A Cisplatin is banned in older adults
 - B RT alone is more effective
 - C Chemotherapy added no survival benefit over age 70 in MACH-NC
 - D Chemotherapy causes second cancers
 - E Older patients do not tolerate IMRT
- Q66. Recurrent** A patient with creatinine clearance 40 mL/min needs definitive RT for stage IVA cancer. Which sensitiser improved survival in an Indian randomised trial?
- A Cetuximab
 - B Weekly low-dose docetaxel
 - C Methotrexate
 - D Bleomycin
 - E Nimotuzumab alone
- Q67. Recurrent** What is the absolute 5-year overall survival gain from concurrent chemoradiation in MACH-NC?
- A About 1%
 - B About 15%
 - C About 25%
 - D About 6.5%
 - E None
- Q68. Recurrent** In the Indian ConCERT trial, weekly cisplatin with RT compared with 3-weekly cisplatin had:
- A Non-inferior locoregional control and less severe toxicity
 - B More vomiting
 - C Worse control
 - D More kidney injury
 - E No difference in toxicity
- Q69. Recurrent** What did JCOG1008 show for postoperative chemoradiation?
- A 3-weekly was clearly superior
 - B Weekly cisplatin was non-inferior and less toxic than 3-weekly
 - C RT alone was best
 - D Chemotherapy is unnecessary for ENE
 - E Cetuximab was better
- Q70. Recurrent** A patient progresses 3 months after cisplatin chemoradiation with lung metastases. Preferred next therapy (if available)?
- A A PD-1 inhibitor (nivolumab or pembrolizumab)
 - B Repeat cisplatin
 - C Cetuximab-RT
 - D Observation
 - E Neck dissection
- Q71. Recurrent** For first-line recurrent/metastatic disease with CPS 30 and slow progression, which is reasonable?
- A Methotrexate alone
 - B Observation
 - C Pembrolizumab alone
 - D EXTREME only
 - E Re-irradiation alone
- Q72. Recurrent** In KEYNOTE-048, pembrolizumab alone versus EXTREME had a LOWER response rate but longer survival. What explains this?
- A Response always equals survival
 - B Durable responses and long-term survivors in a minority on immunotherapy
 - C Measurement error
 - D Chemotherapy kills patients
 - E Crossover

- Q73. Recurrent** A survivor 2 years after RT needs a molar extraction. Best approach?
- A Routine extraction at any clinic
 - B Extract and stop fluoride
 - C Never extract under any circumstances
 - D Extract and start bisphosphonate
 - E Refer to an oral surgeon experienced with irradiated patients; atraumatic extraction
- Q74. Recurrent** Exposed mandibular bone at an extraction site 1 year after RT (OPG schematic). Diagnosis?
- A Dry socket only
 - B Recurrence certainly
 - C Osteoporosis
 - D Osteoradionecrosis
 - E Normal healing
- Q75. Recurrent** Which statement about surveillance imaging after head and neck cancer is correct?
- A No examination is needed if PET is negative
 - B CT every 3 months for life
 - C Serum markers replace imaging
 - D A post-treatment baseline is advised; routine serial scans thereafter are not proven
 - E PET-CT every month in year 1
- Q76. Recurrent** What did adding cetuximab to cisplatin-RT achieve in RTOG 0522?
- A No improvement in outcomes, more toxicity
 - B Better survival
 - C Fewer distant metastases
 - D Less mucositis
 - E Better larynx preservation
- Q77. Oropharynx** Which genomic pattern is typical of tobacco-driven (HPV-negative) head and neck cancer?
- A BRAF V600E
 - B TP53 mutation and CDKN2A loss with chromosomal instability
 - C Wild-type TP53 with TRAF3 loss
 - D No copy-number changes
 - E E2F1 amplification with intact CDKN2A
- Q78. Oropharynx** What proportion of long-term partners of patients with HPV-associated oropharyngeal cancer had oncogenic oral HPV in a US study?
- A About 90%
 - B None could be tested
 - C About 50%
 - D All partners
 - E About 4% overall, similar to the general population
- Q79. Oropharynx** p16 IHC on a fine-needle aspirate of a cystic neck node is equivocal. Best next step?
- A Repeat p16 in 6 months
 - B Assume HPV-negative
 - C HPV DNA/RNA testing (PCR or ISH) on the cell block
 - D Excise the node
 - E Treat as lymphoma
- Q80. Oropharynx** After relapse, how did survival compare by HPV status in RTOG 0129/0522?
- A HPV-positive tumours never relapse
 - B Identical
 - C Only distant relapse differed
 - D Worse if p16-positive
 - E Median 2.6 vs 0.8 years, better if p16-positive

- Q81. Nasopharynx** A fit 42-year-old has stage IVA (T4N2) nasopharyngeal carcinoma. Standard treatment?
- A RT alone
 - B Surgery then adjuvant RT
 - C Cetuximab with RT
 - D Palliative chemotherapy only
 - E Induction gemcitabine–cisplatin, then cisplatin–IMRT
- Q82. Nasopharynx** After chemoradiation for N3 nasopharyngeal carcinoma, which adjuvant option improved failure-free survival?
- A Metronomic capecitabine for 1 year
 - B Observation only is best
 - C Weekly docetaxel for 6 months
 - D Tamoxifen
 - E Cetuximab maintenance

Level 3 · Challenging

- Q83. Oral** Which statement about KEYNOTE-689 is correct?
- A Benefit in event-free survival was confined to CPS ≥ 1 , and overall survival was immature
 - B Pathological complete response was about 50%
 - C It was limited to HPV-positive disease
 - D It replaced surgery
 - E It improved overall survival in all patients
- Q84. Oral** In NIVOPOSTOP, nivolumab added to postoperative cisplatin–RT:
- A Was tested mainly in HPV-positive disease
 - B Required CPS ≥ 20
 - C Improved distant control only
 - D Reduced toxicity
 - E Improved 3-year DFS (63 vs 53%) mainly through locoregional control
- Q85. Oral** Why did the Tata trial (Noronha 2018) favour 3-weekly cisplatin in the postoperative setting, unlike JCOG1008 and ConCERT?
- A It was a non-randomised study
 - B It included only HPV-positive patients
 - C It used a lower weekly dose, giving a lower cumulative dose
 - D Weekly cisplatin never works
 - E It used cetuximab
- Q86. Oral** A lateralised oral tongue cancer has DOI 0.8 mm. Recommended neck management?
- A Bilateral neck dissection
 - B Neck RT
 - C Chemoradiation
 - D Radical neck dissection
 - E Observation
- Q87. Oral** Borderline-resectable gingivobuccal cancer in a fit patient. Which approach may convert it to resectable?
- A TPF induction chemotherapy, then reassessment for surgery
 - B Observation
 - C Low-dose methotrexate
 - D Cetuximab alone
 - E Brachytherapy only
- Q88. Oral** For which T1 oral site does guidance suggest observation of the neck?
- A Oral tongue with DOI 5 mm
 - B Lower lip
 - C Hard palate
 - D Buccal mucosa
 - E Retromolar trigone

- Q89. Oropharynx** In ARTSCAN III (mostly HPV-positive), cetuximab-RT compared with weekly cisplatin-RT had:
- A More locoregional failure (23 vs 9%)
 - B Identical outcomes
 - C Less skin toxicity
 - D Better survival
 - E Fewer distant metastases
- Q90. Oropharynx** Which statement about de-escalation in HPV-associated oropharynx cancer is correct?
- A RT dose of 40 Gy is standard
 - B Chemotherapy alone is enough
 - C It is standard for all non-smokers
 - D It remains investigational and should be done in trials
 - E Cetuximab is the approved de-escalation drug
- Q91. Oropharynx** A p16-positive T2N1 (single 2.5 cm node, no ENE) tonsil cancer in a never-smoker. Which is a guideline-supported option?
- A Trimodality therapy routinely
 - B Chemoradiation with cetuximab
 - C Definitive RT alone
 - D Observation
 - E Induction TPF then CRT
- Q92. Oropharynx** A p16-positive T3N2 oropharyngeal cancer. Preferred approach?
- A Cetuximab-RT
 - B Induction only
 - C TORS then chemoradiation
 - D RT alone
 - E Definitive cisplatin chemoradiation rather than surgery followed by chemoradiation
- Q93. Oropharynx** Why is p16 not routinely tested in oral cavity cancer?
- A It changes the oral cavity T stage
 - B p16 positivity there often does not reflect HPV-driven cancer and has unclear meaning
 - C It is too expensive
 - D It predicts cetuximab benefit
 - E It is always negative
- Q94. Larynx** In RTOG 91-11 long-term follow-up, 10-year survival was:
- A 28% concurrent, 39% induction, 32% RT alone
 - B Identical in all arms at 50%
 - C 10% induction
 - D 60% in all arms
 - E 80% concurrent
- Q95. Larynx** Which patient is NOT a good candidate for larynx preservation?
- A Fit 55-year-old with T3 pyriform sinus cancer
 - B T3 glottic cancer with a fixed cord
 - C T2 supraglottic cancer
 - D N2b disease with a T2 primary
 - E T4a cancer with extensive thyroid cartilage destruction and a non-functioning larynx
- Q96. Larynx** In EORTC 24891 (pyriform sinus), induction PF then RT versus laryngectomy showed:
- A Better survival with induction
 - B No difference in survival, with larynx preservation in many survivors
 - C No patient kept the larynx
 - D More distant metastases with surgery
 - E Worse survival with induction

- Q97. Larynx** Subglottic T2NO cancer: which nodal levels need elective treatment?
- A Bilateral II–IV and level VI (paratracheal)
 - B Level I only
 - C Supraclavicular only
 - D None
 - E Ipsilateral II only
- Q98. Recurrent** Which patient is a candidate for curative re-irradiation?
- A A patient with lung metastases
 - B PS 4
 - C Anyone with recurrence
 - D A fit patient with an unresectable in-field recurrence 3 years after RT, without distant spread, at an experienced centre
 - E Recurrence 2 months after RT with carotid blowout
- Q99. Recurrent** After salvage resection of an in-field recurrence, pathology shows clear margins and no ENE. Postoperative re-irradiation?
- A Always
 - B Only to the neck
 - C Only with SBRT
 - D Not routinely recommended
 - E Only with cetuximab
- Q100. Recurrent** In a Tata Memorial randomised trial, what did adding low-dose nivolumab to oral metronomic chemotherapy achieve?
- A Worse survival
 - B Only better response
 - C Only fewer side effects
 - D No benefit
 - E Improved overall survival
- Q101. Recurrent** Which first-line combination did NOT beat EXTREME in recurrent/metastatic disease?
- A Pembrolizumab + platinum–5FU (KEYNOTE–048)
 - B Pembrolizumab alone in CPS ≥ 20
 - C All of the above beat EXTREME
 - D Pembrolizumab alone in CPS ≥ 1
 - E Nivolumab plus ipilimumab (CheckMate 651)
- Q102. Recurrent** Which checkpoint-inhibitor strategy added to definitive chemoradiation improved outcomes?
- A None so far (JAVELIN H&N 100 and KEYNOTE–412 were negative)
 - B Durvalumab
 - C Avelumab
 - D Pembrolizumab
 - E Nivolumab–ipilimumab
- Q103. Recurrent** Calculate: in KEYNOTE–048, 4-year OS was 19% with pembrolizumab–chemotherapy vs 5% with EXTREME. Roughly how many patients must be treated for one extra 4-year survivor?
- A About 2
 - B About 50
 - C About 100
 - D About 20
 - E About 7
- Q104. Recurrent** Calculate: the Tata docetaxel trial improved 2-year OS from 42% to 51%. Number needed to treat for one extra 2-year survivor?
- A About 2
 - B About 100
 - C About 3
 - D About 11
 - E About 50

- Q105. Recurrent** Erythropoiesis-stimulating agents given during head and neck RT (DAHANCA 10) resulted in:
- A Less mucositis
 - B More locoregional failure and worse survival
 - C No effect at all
 - D Fewer transfusions without harm
 - E Better local control
- Q106. Recurrent** Altered fractionation without chemotherapy (MARCH meta-analysis) improved survival most with:
- A Once-weekly RT
 - B Split-course RT
 - C Brachytherapy alone
 - D Hyperfractionation
 - E Hypofractionation
- Q107. Recurrent** Which is the most frequent site of a second primary cancer after head and neck SCC in smokers?
- A Prostate
 - B Brain
 - C Breast
 - D Lung
 - E Colon
- Q108. Recurrent** A survivor has cough with meals and recurrent chest infections 4 years after chemoradiation. Most likely cause and test?
- A Anxiety; reassurance
 - B GERD; endoscopy only
 - C Lung metastases; PET-CT
 - D Asthma; spirometry
 - E Late radiation-associated dysphagia with aspiration; videofluoroscopy or FEES
- Q109. Recurrent** For an isolated neck recurrence after prior neck dissection and RT, with multiple nodes and ENE on salvage surgery, what follows?
- A Laryngectomy
 - B Observation only
 - C Cetuximab alone
 - D Postoperative re-irradiation with chemotherapy in selected patients
 - E Nothing can be done
- Q110. Oropharynx** In RTOG 0129, which group had 3-year survival of about 46%?
- A HPV-positive women
 - B Never-smokers with HPV-positive T1
 - C HPV-positive with NO disease
 - D HPV-positive with ≤ 10 pack-years
 - E HPV-negative with > 10 pack-years (or T4)
- Q111. Oropharynx** In NRG-HN002, 60 Gy RT alone versus 60 Gy with weekly cisplatin in HPV-positive non-smokers showed:
- A More locoregional failure with RT alone (10 vs 3%); RT alone missed its PFS target
 - B No locoregional failures in either arm
 - C RT alone became standard
 - D Better PFS with RT alone
 - E Worse OS with chemotherapy
- Q112. Oropharynx** In ECOG 3311, what did 50 Gy versus 60 Gy adjuvant RT after transoral surgery achieve in intermediate-risk HPV-positive disease?
- A More toxicity with 50 Gy
 - B Worse survival with 50 Gy
 - C Higher distant metastasis with 50 Gy
 - D Similar 3-year PFS (95 vs 94%) with less grade ≥ 3 toxicity (15 vs 25%)
 - E No patient needed adjuvant RT

Q113. Oropharynx What is the current role of circulating tumour HPV DNA after treatment?

- A Useful in HPV-negative cancer
- B Promising for surveillance (high negative predictive value) but not yet standard
- C Replaces PET-CT at 12 weeks
- D Screening test for the general population
- E Used to choose cetuximab

Q114. Nasopharynx First-line therapy for metastatic nasopharyngeal carcinoma with good performance status?

- A Methotrexate
- B Pembrolizumab alone only if CPS ≥ 20
- C Observation
- D Cisplatin–5FU–cetuximab (EXTREME)
- E Gemcitabine–cisplatin plus a PD-1 inhibitor

Q115. Nasopharynx A resectable local recurrence of nasopharyngeal carcinoma 3 years after IMRT. Which approach gave longer survival in a randomised trial?

- A Observation
- B Endoscopic nasopharyngectomy rather than re-irradiation
- C Chemotherapy alone
- D Re-irradiation once daily
- E Brachytherapy alone

Q116. Nasopharynx Which late effect is particularly important to monitor after nasopharyngeal radiotherapy?

- A Pulmonary fibrosis
- B Hepatic fibrosis
- C Infertility only
- D Hypopituitarism and temporal lobe necrosis
- E Cardiomyopathy

Answer key

1-E 2-A 3-A 4-A 5-E 6-B 7-C 8-D 9-E 10-B 11-B 12-D 13-A 14-C 15-B 16-B 17-C 18-D 19-C 20-D 21-C
22-A 23-E 24-D 25-D 26-A 27-A 28-B 29-C 30-A 31-E 32-C 33-C 34-B 35-C 36-A 37-E 38-E 39-D 40-B
41-A 42-C 43-B 44-D 45-D 46-A 47-C 48-C 49-B 50-C 51-B 52-C 53-A 54-C 55-E 56-B 57-B 58-E
59-D 60-D 61-C 62-A 63-C 64-C 65-C 66-B 67-D 68-A 69-B 70-A 71-C 72-B 73-E 74-D 75-D 76-A 77-B
78-E 79-C 80-E 81-E 82-A 83-A 84-E 85-C 86-E 87-A 88-B 89-A 90-D 91-C 92-E 93-B 94-A 95-E 96-B
97-A 98-D 99-D 100-E 101-E 102-A 103-E 104-D 105-B 106-D 107-D 108-E 109-D 110-E 111-A 112-D 113-B
114-E 115-B 116-D

Explanations

- Q1 • E** Lip and oral cavity cancer leads among Indian men, driven by smokeless tobacco and areca nut; India carries about a third of the world burden.
- Q2 • A** Oral tobacco and areca nut quid are the dominant causes of buccal and gingivobuccal cancers; areca nut is a carcinogen even without tobacco.
- Q3 • A** A red velvety patch (erythroplakia) frequently shows dysplasia or carcinoma on biopsy; leukoplakia and submucous fibrosis carry lower but real risk.
- Q4 • A** Oral submucous fibrosis is caused by areca nut; it is potentially malignant and makes examination difficult.
- Q5 • E** Any ulcer, patch or lump persisting 2 weeks after removing an irritant needs a biopsy; empirical treatment delays diagnosis.
- Q6 • B** An indurated ulcer with raised rolled edges on the lateral tongue in a tobacco user is squamous carcinoma until biopsy proves otherwise. The left white patch is a leukoplakia to biopsy as well.
- Q7 • C** DOI (>5 mm = at least T2; >10 mm = T3) joined size; tumour thickness is not the same measurement.
- Q8 • D** Tumours ≤2 cm with DOI over 5 mm and up to 10 mm are T2.
- Q9 • E** Surgery gives pathological staging and less long-term morbidity than radiotherapy to the mouth; RT is for those who cannot have surgery.
- Q10 • B** Medullary invasion needs segmental resection, usually reconstructed with a vascularised fibula flap and plate.
- Q11 • B** The fibula provides up to 25 cm of bone that tolerates multiple osteotomies and can take dental implants.
- Q12 • D** The oropharynx includes the tonsils, base of tongue, soft palate and posterior pharyngeal wall; the oral tongue belongs to the oral cavity.
- Q13 • A** HPV-16 causes 70–80% of oropharyngeal cancers in the US and Western Europe; EBV is linked with nasopharyngeal carcinoma.
- Q14 • C** Strong, diffuse nuclear and cytoplasmic p16 staining in ≥70% of cells; confirm with HPV DNA/RNA when decisions hinge on it.
- Q15 • B** Block-type strong nuclear and cytoplasmic staining in nearly all cells meets the ≥70% threshold.
- Q16 • B** A cystic level II node in an adult is metastatic cancer until proven otherwise, typically from an HPV-associated tonsil or base-of-tongue primary.
- Q17 • C** In RTOG 0129, 3-year survival was about 82% vs 57%. HPV-associated cancers are more sensitive to chemoradiation.
- Q18 • D** The vocal cords vibrate to make voice, so even small tumours cause hoarseness; glottic cancers are often found at stage I.
- Q19 • C** Hoarseness >3 weeks, especially in a smoker, needs visualisation of the larynx.
- Q20 • D** Glottic cancer rarely spreads to nodes; supraglottic and hypopharyngeal cancers often do and need bilateral neck treatment.
- Q21 • C** Hypopharyngeal cancers grow silently in a rich lymphatic area and usually present at stage III–IV.

- Q22 · A** Tumour limited to one vocal cord with normal mobility is T1a; both cords would be T1b; impaired mobility T2; fixation T3.
- Q23 · E** Gross cartilage destruction or a non-functioning larynx does better with laryngectomy and adjuvant RT than with organ preservation.
- Q24 · D** Squamous carcinoma dominates the mucosal sites; keratin pearls are typical of well-differentiated tumours.
- Q25 · D** FNAC diagnoses most metastatic squamous carcinoma; open excision before finding the primary can compromise treatment.
- Q26 · A** Earlier PET gives false positives from inflammation; a negative 12-week PET has a high negative predictive value.
- Q27 · A** Cisplatin has the strongest evidence; cetuximab is inferior and reserved for selected situations.
- Q28 · B** Starting later than about 6 weeks and a long total treatment time are linked with more local recurrence.
- Q29 · C** Hypothyroidism after neck RT is common and often silent.
- Q30 · A** Extractions or trauma in irradiated bone trigger most cases; extract unsalvageable teeth before RT and use fluoride for life.
- Q31 · E** Nivolumab improved median OS (7.7 vs 5.1 months) and 1-year OS (34 vs 20%) over single-agent chemotherapy or cetuximab.
- Q32 · C** CPS counts PD-L1-positive tumour and immune cells per 100 tumour cells; CPS ≥ 1 and ≥ 20 guide choices.
- Q33 · C** That is why follow-up is most intensive in years 1–3.
- Q34 · B** Smokers with ≥ 20 pack-years are at high risk of second lung primaries.
- Q35 · C** E6, with E6-associated protein, degrades p53; E7 inactivates Rb. Integration usually disrupts E2, the repressor of E6 and E7.
- Q36 · A** With Rb disabled the cell over-produces p16; in tobacco-driven cancer CDKN2A is usually deleted and p16 is low.
- Q37 · E** Eustachian tube blockage by a nasopharyngeal tumour causes one-sided middle-ear effusion; level V and bilateral nodes are typical of NPC.
- Q38 · E** EBER in-situ hybridisation identifies EBV in tumour cells; plasma EBV DNA is a tumour marker.
- Q39 · D** MRI shows skull base, parapharyngeal, perineural and intracranial spread and retropharyngeal nodes better than CT.
- Q40 · B** D'Cruz: elective neck dissection improved 3-year OS (80 vs 67.5%) in early oral cancer; DOI > 3 mm favours elective treatment.
- Q41 · A** Elective dissection also improved DFS (69.5 vs 45.9%); benefit was clearest with DOI > 3 mm.
- Q42 · C** Five-year neck recurrence-free survival (89.6 vs 89.4%) and OS were similar.
- Q43 · B** Close (< 2 mm) or involved margins in early oral cancer are better re-excised than irradiated.
- Q44 · D** Intermediate-risk features $\rightarrow$ RT alone; cisplatin is added only for positive margins or ENE.
- Q45 · D** ENE and positive margins are the two features where adding cisplatin helped in both EORTC 22931 and RTOG 9501.
- Q46 · A** The edentulous mandible lacks the dental barrier; even minimal cortical invasion usually needs segmental resection.
- Q47 · C** An unreconstructed buccal defect contracts and causes irreversible trismus.
- Q48 · C** DOI is measured from the level of the adjacent normal basement membrane, so an exophytic tumour may be thick but shallow.
- Q49 · B** Screening cut oral cancer deaths by 27% overall and 29% in tobacco/alcohol users despite real-life compliance.
- Q50 · C** KEYNOTE-689: 3-year EFS about 60 vs 46% in CPS ≥ 1 ; overall survival immature.
- Q51 · B** RTOG 1016 (5-year OS 78 vs 85%) and De-ESCALaTE (2-year OS 89 vs 98%) favoured cisplatin.
- Q52 · C** HPV-associated T1 N1 (ipsilateral nodes ≤ 6 cm) is stage I.
- Q53 · A** Non-HPV: T1 N1 (single ipsilateral ≤ 3 cm) is stage III.

- Q54 · C** In EPIC-OPC, discordant tumours had 5-year OS about 55% vs 81% for double-positive.
- Q55 · E** Both are reasonable; choose the route least likely to need extra modalities.
- Q56 · B** Smoking above ~10 pack-years erodes the HPV survival advantage (Gillison 2012).
- Q57 · B** PET-CT before instrumentation avoids false positives; tonsillectomy and lingual tonsillectomy find many hidden primaries.
- Q58 · E** A negative PET has a high negative predictive value; PET-NECK showed surveillance is as safe as planned dissection.
- Q59 · D** Concurrent therapy: 5-year locoregional control 68% vs 55% (induction) and 51% (RT alone); 10-year survival trended lower than induction.
- Q60 · D** Survival equalled laryngectomy (2-year 68%), proving organ preservation was safe.
- Q61 · C** Both give high control and good voice; no elective neck treatment.
- Q62 · A** Supraglottic cancers have rich bilateral lymphatics.
- Q63 · C** TREMPIN and TAX 324 experience: use weekly carboplatin or cetuximab-type sensitisers after induction.
- Q64 · C** TEP speech is the most natural; electrolarynx and oesophageal speech are alternatives.
- Q65 · C** MACH-NC: HR 0.97 over 70; decide by fitness, not age alone.
- Q66 · B** Patil 2023: 2-year OS 51 vs 42% and DFS 42 vs 30% with docetaxel added to RT.
- Q67 · D** 71 trials, 10,680 patients; HR 0.83.
- Q68 · A** Grade ≥3 mucositis 41 vs 54%, kidney toxicity 4 vs 18%.
- Q69 · B** 3-year OS 72 vs 59% with weekly cisplatin; less hearing loss and kidney injury.
- Q70 · A** Platinum-refractory (<6 months): CheckMate 141 and KEYNOTE-O40.
- Q71 · C** KEYNOTE-O48: pembrolizumab alone improved OS in CPS ≥20 (median 15 vs 11 months) with far less toxicity.
- Q72 · B** Response rate 17 vs 36%, yet 4-year OS was higher: judge immunotherapy by survival, not response alone.
- Q73 · E** Extraction in irradiated bone is the main trigger for osteoradionecrosis.
- Q74 · D** Lytic bone with sequestrum in an irradiated field; biopsy if recurrence is possible.
- Q75 · D** Examination with a scope drives follow-up; image for symptoms or hard-to-examine sites.
- Q76 · A** Cetuximab added nothing to cisplatin-RT.
- Q77 · B** TCGA: HPV-negative tumours carry TP53 mutations, CDKN2A loss, CCND1/EGFR amplification and 3p/9p loss; HPV-positive tumours show PIK3CA, TRAF3 and E2F1 changes.
- Q78 · E** Partners are not at increased risk; reassure and avoid unnecessary testing.
- Q79 · C** p16 is less sensitive on aspirates; direct HPV testing resolves it.
- Q80 · E** Timing and sites of relapse were similar, but survival after progression was much longer with HPV-associated disease.
- Q81 · E** Induction GP improved recurrence-free and overall survival before chemoradiation (Zhang 2019); surgery has no role for the primary.
- Q82 · A** Chen 2021 (Lancet): 3-year failure-free survival about 85 vs 76% with mild toxicity.
- Q83 · A** Complete pathological response was only ~3%; about 60% had oral cavity cancer.
- Q84 · E** Benefit regardless of PD-L1; very few HPV-positive patients, so use in HPV-negative disease.
- Q85 · C** Weekly cisplatin works only at full dose; aim for a cumulative dose of at least 200 mg/m².
- Q86 · E** The most superficial lateralised tumours (DOI ≤1 mm) can be observed; 1–3 mm favours SLNB in expert centres.
- Q87 · A** Induction TPF is used to attempt surgical and functional preservation; non-responders go to definitive chemoradiation.
- Q88 · B** T1 lower lip cancers have a low risk of nodal spread; buccal, gingival, retromolar and palatal tumours get elective dissection.
- Q89 · A** Cetuximab was inferior regardless of the cisplatin schedule.

- Q90 · D** Outside trials, HPV-positive disease is treated like HPV-negative disease.
- Q91 · C** Single node ≤ 3 cm without adverse features in a non-smoker: RT alone or TORS; smokers or adverse features: chemoradiation.
- Q92 · E** Avoid trimodality therapy; chemoradiation preserves function with excellent outcomes.
- Q93 · B** Most p16-positive oral cavity tumours are HPV-negative unless near the circumvallate papillae.
- Q94 · A** Concurrent therapy had better locoregional control but more non-cancer deaths.
- Q95 · E** Laryngectomy gives better results when the larynx is destroyed or non-functional.
- Q96 · B** 10-year OS 13 vs 14%; about 60% of 5-year survivors kept a normal larynx.
- Q97 · A** Subglottic tumours drain to paratracheal and jugular nodes.
- Q98 · D** Treatment deaths approach 10% and severe toxicity up to 50%: select by interval, volume, prior dose and fitness.
- Q99 · D** Postoperative re-irradiation is suggested only for high-risk pathology.
- Q100 · E** An evidence-based option where full-dose immunotherapy is unaffordable.
- Q101 · E** CheckMate 651 was negative for its primary endpoint.
- Q102 · A** Immunotherapy benefits have come around surgery (KEYNOTE-689, NIVOPOSTOP) and in recurrent disease, not with definitive CRT.
- Q103 · E** Absolute difference 14% $\rightarrow$ NNT $\approx 1/0.14 \approx 7$.
- Q104 · D** Absolute gain 9% $\rightarrow$ NNT ≈ 11 .
- Q105 · B** Five-year locoregional failure 47 vs 34%; do not use ESAs to raise haemoglobin during RT.
- Q106 · D** Hyperfractionation gave the largest gain; with concurrent chemotherapy, once-daily fractionation is standard.
- Q107 · D** Second primaries arise mainly in the head and neck, lung and oesophagus; lung second primaries have the worst outlook.
- Q108 · E** Late dysphagia can appear years after RT; swallowing therapy started early works best.
- Q109 · D** High-risk features after salvage surgery justify postoperative re-irradiation in selected fit patients.
- Q110 · E** Ang 2010 risk groups: low $\sim 93\%$, intermediate $\sim 71\%$, high $\sim 46\%$; HPV status and smoking drive them.
- Q111 · A** Chemotherapy still matters at reduced dose; de-escalation remains investigational.
- Q112 · D** Promising for lower-dose adjuvant RT; not yet compared with non-surgical treatment.
- Q113 · B** Two consecutive positive tests predicted recurrence in 94% in one prospective study; assays and actions are not standardised.
- Q114 · E** GP beat cisplatin-5FU (Zhang 2016); adding toripalimab (JUPITER-02) or camrelizumab (CAPTAIN-1st) improved PFS and OS; no CPS threshold is used.
- Q115 · B** Liu 2021: endoscopic surgery improved survival with fewer severe late effects; if re-RT is needed, hyperfractionation is safer (You 2023).
- Q116 · D** The pituitary, temporal lobes, inner ear, cranial nerves and carotids lie near the high-dose region: yearly endocrine and hearing checks.