Question Bank for Oncology Exam

1. Explain the concept of cancer staging and how it affects treatment decisions. Discuss the TNM staging system.
2. Describe the role of systemic treatment, radiotherapy and surgery in the treatment of solid tumors (tumor type will be specified)
3. What are the common risk factors for every kind of cancer (tumor type will be specified), and how can early detection improve prognosis? Screening tests
4. Discuss how targeted therapies have changed the treatment landscape in cancer
5. Discuss how immunotherapy have changed the treatment landscape in cance
6. Compare and contrast the different types of radiation therapy used in oncology (e.g., external beam radiation, brachytherapy) and their clinical applications.
7. What is the significance of tumor markers in oncology, and how can they be utilized in diagnosis and monitoring?
8. What are the clinical challenges associated with the management of metastatic cancer? Discuss the role of palliative care in these cases.
9. Discuss the side effects of common cancer treatments such as chemotherapy, radiation therapy, and immunotherapy. How can these be managed to improve patient quality of life?
10. Discuss the role of personalized medicine in oncology. How do genetic profiling and molecular diagnostics influence treatment choices for patients with cancer?
11. Cancer and bone metastases
12. Radiotherapy as the alernative to surgery
13. Immunotherapy in oncology
14. Explain the role of human papillomavirus (HPV) in the development of oropharyngeal cancer and its impact on prognosis and treatment.
15. How does the management of early-stage versus advanced-stage head and neck cancers differ, including surgical and non-surgical options?
16. Discuss the importance of multidisciplinary teams in the treatment of head and neck cancers, including surgical, radiological, and oncological involvement.
17. Explain the role of chemotherapy and radiation therapy in the treatment of head and neck squamous cell carcinoma (HNSCC). When is combined therapy recommended?
18. Discuss the role of sentinel lymph node biopsy in the staging and treatment of cancer
19. How do the treatment strategies for nasopharyngeal carcinoma differ from those for other head and neck cancers?
20. Describe the differences between primary and metastatic brain tumors in terms of etiology, clinical presentation, and treatment options.
21. What are the most common types of brain tumors in adults, and how do their management strategies differ?
22. Discuss the role of imaging techniques, such as MRI and CT scans, in diagnosing brain tumors. What are the advantages and limitations of these methods?
23. What are the typical symptoms of a brain tumor, and how can these symptoms help in the differential diagnosis of intracranial masses?
24. Discuss the role of surgery in the treatment of brain tumors, and explain when surgical resection is considered appropriate versus when alternative approaches are needed.
25. How does radiation therapy contribute to the treatment of brain tumors, and what are the potential long-term side effects of this modality?
26. What is the role of chemotherapy in the treatment of brain tumors, particularly in high-grade gliomas such as glioblastoma?
27. Discuss the challenges in the management of glioblastoma multiforme (GBM), including its aggressive nature, recurrence, and current treatment strategies.
28. Explain the importance of multidisciplinary care in the management of brain tumors.

How do neurosurgeons, oncologists, and other specialists collaborate in the treatment of these patients?

1. What are the typical clinical signs and symptoms of breast cancer?
2. How would you differentiate between a benign and malignant breast lump?
3. What are the standard imaging modalities used in breast cancer screening and diagnosis?
4. What is the significance of hormone receptor (ER, PR) and HER2 status in breast cancer?
5. What are the characteristics of triple-negative breast cancer, and how does it affect prognosis?
6. What are the main treatment options for early-stage breast cancer?
7. What are the indications for breast-conserving surgery versus mastectomy?
8. How does neoadjuvant chemotherapy impact breast cancer treatment?
9. What are the common side effects of chemotherapy used in breast cancer treatment?
10. What is the role of targeted therapy in HER2-positive breast cancer?
11. What are the recommended follow-up protocols for breast cancer survivors?
12. What factors influence the prognosis of breast cancer?
13. Breast conserving therapy
14. How does central vs. peripheral lung cancer affect clinical presentation?
15. What are the paraneoplastic syndromes associated with lung cancer?
16. How do you evaluate a patient with suspected lung cancer?
17. What is the role of chest X-ray and CT scan in diagnosing lung cancer?
18. What are the indications for PET-CT in lung cancer evaluation?
19. What are the major histological subtypes of lung cancer? Describe the differences between them.
20. How do small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC) differ in behavior and prognosis?
21. What molecular mutations are commonly found in lung cancer, and how do they influence treatment?
22. What are the treatment options for early-stage NSCLC?
23. When is surgery indicated for lung cancer, and what are the common surgical procedures?
24. What are the principles of chemotherapy in lung cancer treatment?
25. How do targeted therapies and immunotherapy work in lung cancer, and which patients benefit most?
26. What are the most important prognostic factors in lung cancer?
27. How do treatment options differ between early-stage and advanced-stage lung cancer?
28. What are the most common sites of metastasis in lung cancer, and how do they impact management?
29. What are the common symptoms and risk factors of prostate cancer, bladder cancer, kidney cancer, testicular cancer?
30. How is hematuria evaluated in a patient suspected of having genitourinary cancer?
31. What imaging modalities are used in the diagnosis of prostate cancer/bladder cancer/kidney cancer/testicular cancer?
32. Radical and paliative treatment of kidney cancer
33. Radical and paliative treatment in bladder cancer
34. Radical and paliative treatment in prostate cancer
35. Germ cell tumors
36. What is the role of PSA in prostate cancer screening and diagnosis?
37. What tumor markers are associated with testicular cancer, and how are they used in diagnosis?
38. What are the differences between seminomas and non-seminomatous germ cell tumors?
39. What are the treatment options for localized prostate cancer?
40. How is muscle-invasive bladder cancer managed?
41. What role does chemotherapy play in the treatment of testicular cancer?
42. How does androgen deprivation therapy work in prostate cancer?
43. What are the treatment options for metastatic prostate cancer?
44. What are the main prognostic factors in uromalignancy?
45. What are the most common oncological emergencies + management?
46. What are the clinical signs and symptoms of superior vena cava (SVC) syndrome?
47. How do you recognize spinal cord compression in a cancer patient?
48. What are the early and late manifestations of tumor lysis syndrome (TLS)?
49. How does malignant hypercalcemia present clinically?
50. What are the key signs of neutropenic fever, and how is it diagnosed and treated?
51. What imaging and laboratory tests are required for diagnosing superior vena cava syndrome?
52. What are the common malignancies associated with spinal cord compression?
53. How does chemotherapy-induced neutropenia lead to an oncological emergency?
54. What are the first-line treatments for superior vena cava syndrome?
55. How is spinal cord compression managed in a cancer patient?
56. What is the standard treatment protocol for tumor lysis syndrome?
57. How do you manage neutropenic fever in an oncology patient?
58. How do you manage a patient with SIADH secondary to malignancy?
59. What are the ABCDE criteria for melanoma diagnosis?
60. How do squamous cell carcinoma (SCC) and basal cell carcinoma (BCC) differ in clinical presentation?
61. What are the risk factors for developing melanoma?
62. Cancer of unknown primary
63. What are the treatment options for localized melanoma?
64. How is metastatic melanoma treated?
65. What is the role of targeted therapy (e.g., BRAF inhibitors) in melanoma?
66. Soft tissue sarcomas – clinical presentation and treatment
67. What are the most common symptoms of cervical cancer?
68. How does endometrial cancer typically present?
69. What are the early and late symptoms of ovarian cancer?
70. What are the risk factors for developing cervical cancer/endometrial cancer and ovarian cancer?
71. How does HPV infection contribute to cervical carcinogenesis?
72. What are the key imaging modalities used for diagnosing gynecological cancers?
73. What are the treatment options for early-stage cervical cancer?
74. How is advanced endometrial cancer managed?
75. What is the role of cytoreductive surgery in ovarian cancer treatment?
76. How do platinum-based chemotherapy regimens work in ovarian cancer?
77. What are the indications for radiation therapy in cervical cancer?
78. What are the key side effects of chemotherapy used in gynecological cancers?
79. What are the most common symptoms of colorectal cancer?
80. How does gastric cancer typically present?
81. What are the early and late symptoms of esophageal cancer?
82. How is pancreatic cancer usually diagnosed, and why is it often detected late?
83. What are the risk factors for hepatocellular carcinoma (HCC)?
84. Treatment of HCC
85. What are the key risk factors for developing colorectal cancer?
86. What tumor markers are useful in diagnosing and monitoring GI cancers?
87. What imaging modalities are commonly used in diagnosing gastric and esophageal cancer?
88. Radical treatment of pancreatic cancer
89. What is the role of endoscopic ultrasound (EUS) in GI cancer staging?
90. What are the indications for liver biopsy in suspected hepatocellular carcinoma?
91. What are the treatment options for early-stage colorectal cancer?
92. How is locally advanced esophageal cancer managed?
93. What are the principles of perioperative therapy in gastric cancer?
94. What are the indications for palliative care in advanced GI cancers?
95. How is unresectable pancreatic cancer managed?
96. How is metastatic colorectal cancer managed?
97. What factors determine whether gastrointestinal cancer is treated with surgery or chemotherapy and radiation?
98. How is locally advanced rectal cancer treated differently from colon cancer?
99. What are the most important prognostic factors in colorectal cancer?
100. Pancreatic cancer- late stage- treatment
101. GIST- clinical presentation and treatment
102. Liver metastases

Case: A 62-year-old male smoker presents with a persistent cough, weight loss, and hemoptysis. Chest X-ray shows a mass in the upper lobe.  
Question: How would you approach the diagnosis and management of this patient, and what is the most likely type of lung cancer in this scenario?  
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Case: A 55-year-old female presents with unexplained weight loss, abdominal discomfort, and intermittent bloody stool. Colonoscopy reveals a mass in the sigmoid colon.  
Question: How would you stage this patient, and what are the surgical and adjuvant treatment options?  
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Case: A 70-year-old man complains of progressive dysphagia and weight loss. Endoscopy shows an ulcerated mass in the distal esophagus.  
Question: What is the most likely diagnosis, how would you stage the cancer, and what treatment options are available?  
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Case: A 64-year-old woman presents with persistent nausea, epigastric pain, and early satiety. A CT scan shows a mass in the stomach.  
Question: What are the risk factors for gastric cancer, how would you confirm the diagnosis, and what are the treatment options?  
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Case: A 58-year-old male presents with jaundice, weight loss, and epigastric pain. Ultrasound reveals a mass at the head of the pancreas.  
Question: What is the next step in the work-up, and how would you approach the management of this patient?  
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Case: A 50-year-old male with a history of cirrhosis presents with ascites and a palpable mass in the right upper quadrant.  
Question: How would you diagnose and manage this patient?  
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Case: A 67-year-old male presents with painless hematuria. Cystoscopy reveals a lesion in the bladder wall.  
Question: How would you stage this patient, and what are the treatment options?  
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Case: A 72-year-old male presents for routine screening with an elevated PSA level. A digital rectal exam reveals an asymmetrical prostate.  
Question: What is your diagnostic approach, and what are the treatment options for localized prostate cancer?  
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Case: A 60-year-old female presents with abdominal bloating, early satiety, and weight loss. Ultrasound reveals an adnexal mass.  
Question: How would you evaluate and manage this patient?  
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Case: A 58-year-old postmenopausal woman presents with vaginal bleeding. An ultrasound reveals thickening of the endometrium.  
Question: How would you investigate further, and what are the treatment options for this patient?  
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Case: A 45-year-old female presents with abnormal vaginal bleeding and post-coital bleeding. Pap smear is positive for high-grade squamous intraepithelial lesions (HSIL).  
Question: What are the next steps in managing this patient, and what are the treatment options?  
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Case: A 38-year-old male presents with a new, irregularly shaped mole on his back. The mole is dark and has recently grown.  
Question: How would you evaluate this lesion, and what is the management approach for suspected melanoma?  
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Case: A 58-year-old male with hypertension presents with back pain and hematuria. A CT scan shows a mass in the left kidney.  
Question: How would you stage and manage this patient?  
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Case: A 64-year-old male with a history of smoking and alcohol use presents with a persistent sore throat and difficulty swallowing.  
Question: What is the likely diagnosis, and what steps would you take for staging and management?  
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Case: A 45-year-old female presents with abnormal uterine bleeding and a pelvic mass. Ultrasound reveals an enlarged uterus with heterogeneous echotexture.  
Question: How would you evaluate this patient, and what are the possible diagnoses and management strategies?  
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Case: A 58-year-old male with a history of colorectal cancer presents with jaundice and weight loss. A CT scan reveals multiple liver lesions.  
Question: What is your approach to managing this patient?  
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Case: A 65-year-old female with a history of ovarian cancer presents with worsening abdominal distention, ascites, and weight loss.  
Question: What is your differential diagnosis, and how would you manage this condition?  
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Case: A 28-year-old male presents with painless swelling in the right testicle.  
Question: What is your diagnostic approach, and what are the management options?  
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Case: A 60-year-old male with persistent cervical lymphadenopathy and no obvious signs of infection. Biopsy shows metastatic squamous cell carcinoma.  
Question: What is your differential diagnosis for the primary tumor, and how would you proceed with treatment?  
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Case: A 70-year-old male presents with painless hematuria. A cystoscopy reveals a bladder mass.  
Question: How would you proceed with the management of this patient?  
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Case: A 60-year-old female with a history of cholecystitis presents with jaundice and weight loss. A CT scan reveals a mass in the gallbladder with liver metastasis.  
Question: What is your approach to treatment?  
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Case: A 62-year-old male with a history of rectal cancer presents with back pain, and imaging reveals bone metastasis.  
Question: What is the management approach for metastatic rectal cancer?  
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Case: A 60-year-old male with a history of smoking and alcohol use presents with a painless neck mass and difficulty swallowing.  
Question: How would you evaluate this patient, and what are the treatment options?  
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Case: A 40-year-old female presents with a palpable breast lump. Biopsy reveals breast carcinoma.  
Question: How is this different from invasive ductal carcinoma, and what is the treatment?  
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Case: A 60-year-old male presents with a painless swelling in his left parotid region. Biopsy reveals malignancy.  
Question: What is your approach to diagnosis and treatment for parotid gland malignancy?  
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Case: A 55-year-old female presents with abnormal vaginal bleeding and pelvic pain. A biopsy reveals cervical cancer with enlarged pelvic lymph nodes.  
Question: What is your treatment plan?  
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Case: A 58-year-old female with a history of breast cancer presents with lower back pain, leg weakness, and difficulty walking.  
Question: What is the likely diagnosis, and what immediate interventions would you consider?  
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Case: A 45-year-old female with a history of lung cancer presents with new-onset headache, vomiting, and blurred vision. CT scan reveals a brain mass.  
Question: What is the cause of her symptoms, and how would you manage this case?  
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Case: A 58-year-old female with breast cancer undergoing chemotherapy presents with a fever and no obvious source of infection.  
Question: How would you manage this patient, and what is the role of empiric antibiotics?  
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Case: A 65-year-old male with prostate cancer presents with worsening bone pain and a new fracture of the femur.  
Question: What is your initial management of pain in this patient, and what further treatments can help with metastatic bone disease?  
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Case: A 50-year-old male undergoing chemotherapy for lymphoma presents with fever, hypotension, and a suspected source of infection.  
Question: What are the key diagnostic and therapeutic steps in managing sepsis in cancer patients?  
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Case: A 45-year-old female with ovarian cancer presents with facial swelling and neck vein distension. CT scan reveals a thrombosis in the superior vena cava.  
Question: How would you manage this condition in a patient with active cancer?