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## **PALIATIVE RADIOTHERAPY**

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# Palliative radiotherapy

## Indications

- pain reduction
- stabilization
- hemostasis
- deobstruction
- improving the quality of life





## Emergency situations in radiotherapy

- CNS metastases
- Threatening pathological fracture
- Spinal cord compression (spinal canal stenosis)
- Superior vena cava Syndrome

# Bone metastases

## Single fields

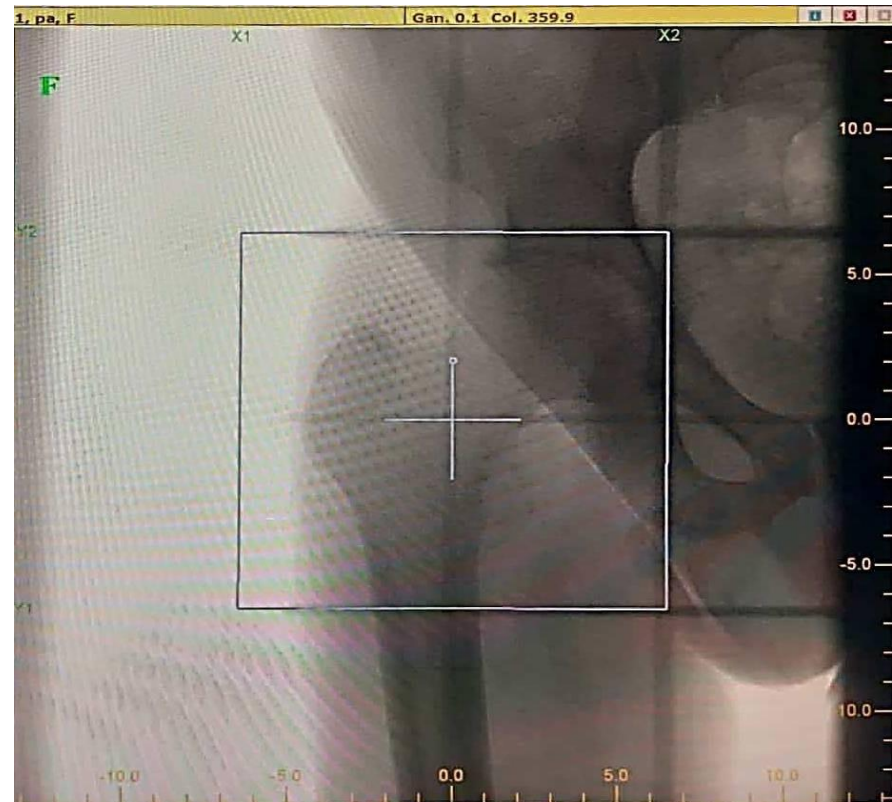
- Spine, sacrum
- Ribs, calvaria

## Parallel - opposite fields

- Pelvis, long bones
- Base of skull
- Dose and fractionation
- 30Gy / 10 fractions
- 20Gy / 5 fractions
- 8Gy / 1 fraction

## Hemibody irradiation

- Lower half
- 8Gy in 1 fraction (9-10 MeV photons)
- Upper half
- 6-8Gy in 1 fraction (9-10 MeV photons)



# CNS metastasis radiotherapy

The treatment is multimodal and includes the use of systemic therapy, surgery, radiotherapy, chemotherapy, immunotherapy and target therapy.

The factors that determine the treatment of metastases in the CNS are:  
presence of neurological deficit, age and general condition of the patient, number of metastases, size of the lesion, localization, status of the primary tumor and extracranial disease.

**A single metastasis** is a single metastasis in the CNS without taking into account the status of extracranial disease.

**A solitary metastasis** is a single metastasis in the CNS in the absence of extracranial disease.

<b>Primary Site</b>	
Lung	20%–50%
Breast	5%–20%
Small cell lung cancer	15%
Melanoma	7%–10%
Renal cell carcinoma	4%–6%
Colon	2%–5%
<b>Relevant Facts</b>	
Median survival	<1 yr
Mean age	60 yr
Annual U.S. incidence	>170,000
Clinical incidence	30%

# CNS metastasis radiotherapy

- **Whole brain radiotherapy (WBRT) with or without surgery**
- **WBRT with or without stereotactic radiosurgery**
- **Surgery with or without RT (localized or WBRT)**
- **Stereotactic radiosurgery**
  
- Doses and fractionation
  
- **Whole brain radiotherapy:**
  - 12 Gy in 2 fractions
  - 18 Gy in 3 fractions
  - 20 Gy in 5 fractions, 4 Gy per fraction over one week
  - 30 Gy in 10 fractions, 3 Gy per fraction, over 2 weeks
  -
- **Focal radioterapy:** 40Gy in 20 fractions, during 4 weeks
- **Stereotactic radiosurgery:** 17 Gy in one fraction

## **Palliative radiotherapy of the chest**

- Cough, chest pain or hemoptysis
  - Bone, lung or skin metastases
  - Vena cava syndrome (SVCS)
  - In patients with ECOG PS 0–1 who are not candidates for curative radiotherapy
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- Effective in 60% of NSCLC patients and 80% of SCLC patients
  - TD 16Gy / 2 fractions or 10Gy / 1 fraction
  - ECOG PS 0 or 1 - consider also 20 Gy / 5 fractions, 30 Gy / 10 fractions or 36 Gy / 12 fractions

# **Palliative radiotherapy of head and neck tumors**

- Locally/locoregionally advanced disease in order to relieve symptoms
- Bleeding
- Pain
- Obstruction of the aero-digestive tract
- Distant metastases (bones, endocranium)



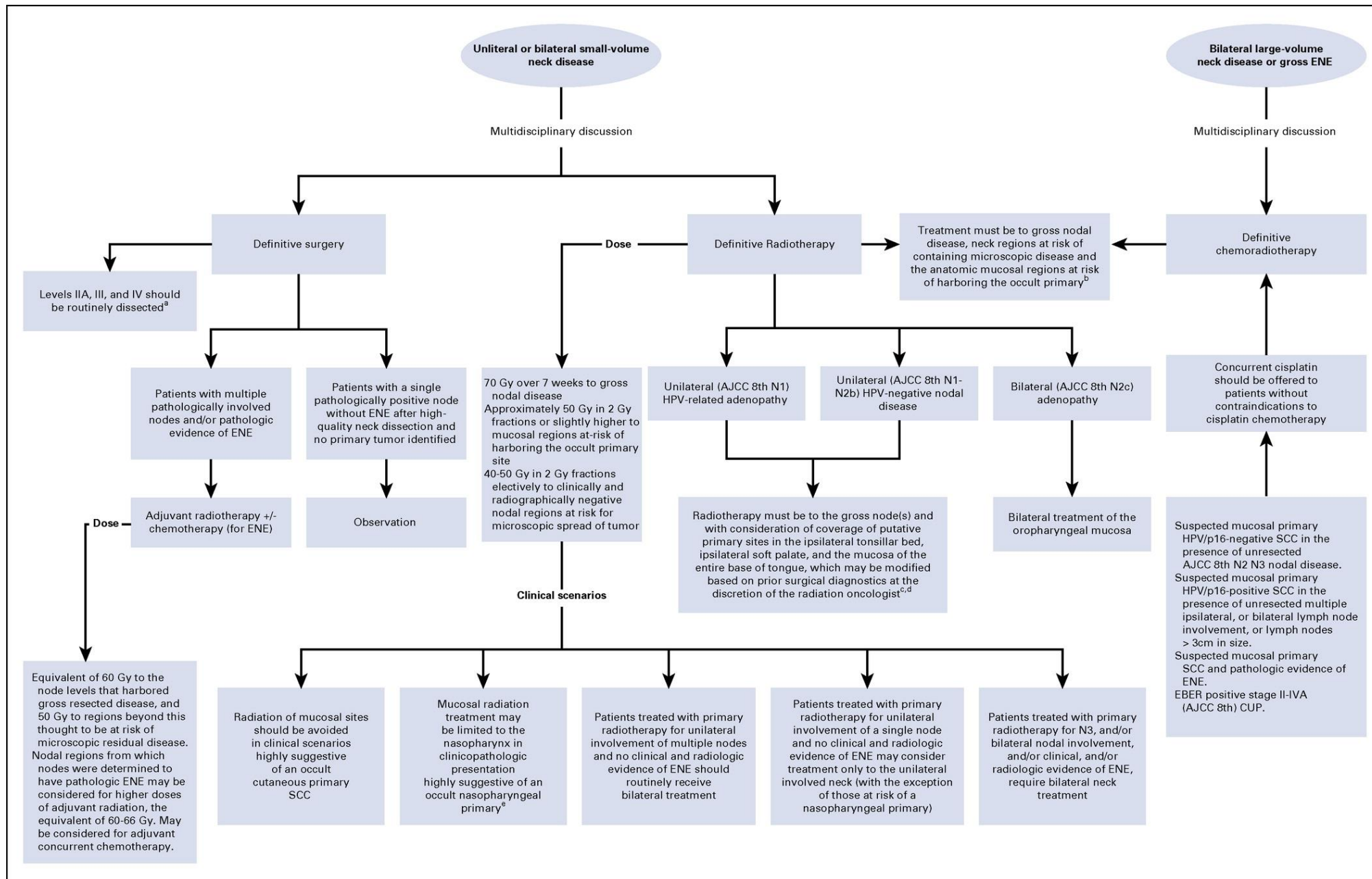
# Prohemostatic palliative radiotherapy

BT and/or EBRT

- Bladder cancer with massive hematuria
- Massive bleeding in gynecological cancer patients
- Rectorage
- Hemoptysis

# **RADIOTHERAPY FOR PRIMARY UNKNOWN** **MALIGNANCIES**

- **Primary goal – find initial localisation!!!**
- **Radiotherapy follows principles of metastatic localisation**
- **The most common in head and neck cancer**



THANK YOU FOR YOUR ATTENTION!

