

Diagnosis and Treatment of Patients with early and advanced Breast Cancer

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Specific Sites of Metastases

Specific Sites Of Metastases

Local Approaches to Metastatic Disease

- **Versions 2002–2019:**

Albert / Bauerfeind / Bischoff / Böhme / Brunnert / Dall / Diel / Fehm / Fersis / Friedrich / Friedrichs / Gerber / Hanf / Janni / Kolberg-Liedtke / Kreipe / Lück / Lux / Maass / Oberhoff / Rezai / Schaller / Schütz / Seegenschmiedt / Solomayer / Souchon / Thommssen

- **Version 2020:**

Loibl / Rody

Specific Sites of Metastases

- **Liver and lung metastases**
- **Malignant pleural and pericardial effusions**
- **Ascites**
- **Bone marrow involvement**
- **Soft tissue metastases**
- **Any other organs**

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**FORSCHEN
LEHREN
HEILEN**

See also chapters „CNS Metastases “ and „Locoregional Recurrence
(Loco-Regional Recurrence Treatment Options in Non Curative Cases)“

General Treatment Aspects of Metastases

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- **Histological / cytological verification**
- **Systemic therapy preferred**
- **Consider surgery only in case of good response to palliative treatment**
- **Radiation for patients in good physical condition with late onset of oligometastases**
- **Local treatment in the case of pain, exulceration, persistence after systemic treatment, bowel obstruction, hydrocephalus occlusus, spinal cord compression**
- **Systemic treatment after surgery**

Oxford		
LoE	GR	AGO
3	B	+
2a	B	++*
2b	C	+
3a	B	+
5	D	+/-
5	D	++

* See chapters with systemic treatment recommendations

Local Therapy in Primary Metastatic Disease

Oxford		
LoE	GR	AGO
<hr/>		
2b^a	B	+/-
2b^a	B	-
5	D	+/-
5	D	-
3a	C	+/-
3a	C	+

- **Surgery (R0) of the primary tumor**
 - In case of bone metastases only
 - In case of visceral metastases
- **Axillary surgery for cN1**
- **Sentinel if cN0**
- **Radiotherapy of the primary tumor**
 - Alone (without surgery)
 - After local surgical treatment with BCS or mastectomy (according to adjuvant indication)

Liver Metastases

Local Therapy

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- **Resection of liver metastases (R0)**
HR-positive: chemotherapy-sensitive, long disease-free interval, absence of extrahepatic disease, ≤ 3 metastases
HER2-positive: age < 50y, metastasis < 5 cm, no further metastasis
- **Regional chemotherapy**
- **Regional radiotherapy**
[SIRT, stereotactic body radiosurgery with volumetric intensity modulated arc therapy (SRS-VMAT), radiochemo-embolization, other modalities]
- **Thermoablation**
(RFA, LITT, cryotherapy)

Oxford		
LoE	GR	AGO
3a	B	+/-
3b	C	+/-
3b	C	+/-
3b	C	+/-

Pulmonary Metastases

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- **Before any surgery: staging and biopsy**
(CT-guided FNA / CNB or transbronchial FNA)
- **Resection of pulmonary metastases by VATS or conventional resection**
 - In case of multi-locular metastatic disease
 - In case of single / few unilateral metastasis with curative intent
- **Thermoablation (CT-guided RFA, LITT)**
- **Regional radiotherapy**
(e.g. stereotactic body radiosurgery with volumetric intensity modulated arc therapy (SRS-VMAT))

Oxford		
LoE	GR	AGO
3a	B	+
3a	B	-
3a	B	+/-
3b	C	+/-
3a	B	+/-

* VATS = video-assisted thoracic surgery

Malignant Pleural Effusions (MPE)

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Incidence:

- ~ 10 % of all breast cancer patients
- ~ 50 % of pat. with advanced breast cancer
- ~ 30 % of all MPE are caused by breast cancer

Clinical presentation:

- Extensive MPE are mostly due to malignancy
- The majority of MPE are symptomatic [dyspnea (80%), dull chest pain (30%), nonproductive cough (10%)]
- Survival is related to the presence of additional metastases, age, ECOG PS and extent of involving the pleural surface

Diagnostic procedures:

- Clinical examination
- Imaging techniques (chest X-Ray, US, CT-Scan)
- Proven malignant effusion [cytology (→ 50% false negative), histology by thoracoscopy]

Malignant Pleural Effusion (MPE)

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- If short life expectancy, less invasive procedures should be considered
- VATS and Talcum-pleurodesis*
- Chemical pleurodesis*
 - Talcum powder
 - Bleomycin, Doxycycline, Mitoxantrone
 - Povidone-iodine (20 ml of 10% solution)
- Continous pleural drainage
- Systemic treatment after pleurodesis
- Serial thoracocentesis

Oxford		
LoE	GR	AGO
4	C	++
1b	B	++
1a	B	+
2b	C	+/-
1b	B	+
2a	B	++
3b	C	+/-
4	C	+/-

* Adequate pain-relief

VATS: video-assisted thoracoscopic surgery

Malignant Ascites

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Ascites:

- Puncture, drainage in symptomatic patients
- Systemic therapy
- Local chemotherapy

Oxford		
LoE	GR	AGO
4	D	++
3b	D	++
3b	D	+/-

Malignant Pericardial Effusion

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Symptomatic pericardial effusion:

- Drainage, fenestration
- Combination with optimized systemic therapy
- VATS (video-assisted thoracic surgery)
- Ultrasound-guided puncture and instillation of cytotoxic compounds
 - Bleomycin, cisplatin, mitomycin C, mitoxantrone etc.
 - Bevacizumab

Oxford		
LoE	GR	AGO
3b	B	++
4	C	++
4	C	+
4	C	+/-
4	C	+/-

Bone Marrow Infiltration Associated with Pancytopenia

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- **Weekly chemotherapy with*:**
 - Epirubicin, Doxorubicin, Paclitaxel
 - Capecitabine
- **HER2-pos.:**
add anti-HER2-treatment

Oxford		
LoE	GR	AGO
4	D	++
4	D	++
5	D	++

* Consider pre-treatment

Soft Tissue Metastasis

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- **Surgery of limited locoregional metastasis (skin, muscular, nodal) with complete resection (R0) after exclusion of further metastasis**
- **Radiotherapy (after surgery or, if immediate surgery is not indicated):**
 - Soft tissue metastasis
 - Paresis, spinal cord compression
 - Plexus infiltration

Oxford		
LoE	GR	AGO
4	C	+
3b	C	+
2b	C	++
3b	C	++