Breast Cancer Follow-Up
Breast Cancer Follow-Up

- **Versions 2002–2016:**
  Bauerfeind / Bischoff / Blohmer / Böhme / Costa / Diel / Gerber / Hanf / Heinrich / Huober / Janni / Kaufmann / Kümmel / Lux / Maass / Möbus / Mundhenke / Oberhoff / Rody / Scharl / Solomayer / Thomssen

- **Version 2017:**
  Maass / Friedrich
### Early detection of curable events
- In-breast recurrence
  - Grade: 1a
  - Evidence: B
  - Level of Evidence: ++
- Loco-regional recurrence*
  - Grade: 1a
  - Evidence: B
  - Level of Evidence: ++

### Early detection of metastases
- Early detection of symptomatic metastases
  - Grade: 3b
  - Evidence: C
  - Level of Evidence: +
- Early detection of asymptomatic metastases
  - Grade: 1a
  - Evidence: A
  - Level of Evidence: -

* Loco-regional recurrence is associated with higher risk for mortality in node positive, PR negative, younger patients and patients with short time from diagnosis to recurrence
Breast Cancer Follow-Up Objectives

- Improve quality of life
- Improve physical performance
- Reduce therapy related side effects as osteoporosis, cardiac failure, fatigue, neurotoxicity, lymphedema, sexual disorders, cognitive impairment
Breast Cancer Follow-Up

Objectives

- **Re-evaluation** of current adjuvant therapy
  - incl. monitoring of compliance with endocrine therapies

- **Pro-active improvement of compliance**: 5 D ++
  - Patient information about efficacy data of 5-10 year endocrine therapy
  - Early therapy of side effects (sports, NSAIDs, vitamin D / calcium)
Breast Cancer Follow-Up Objectives

- Psycho-social aspects of support and counseling
  - Pregnancy, contraception, sexuality, quality of life, menopausal symptoms, fear for recurrence

- Second opinion on primary therapy

- General counseling (genetics, HRT, prophylactic surgery, breast reconstruction)

Oxford / AGO
LoE / GR

<table>
<thead>
<tr>
<th>4</th>
<th>C</th>
<th>+</th>
</tr>
</thead>
</table>

Further Information
References
Breast Cancer Follow-Up

Objectives

Intervention with regard to co-morbidities and life-style risks in order to reduce negative effects on disease course

- Treatment of type II-diabetes
  (>25% undetected DM in postmenopausal BC patients)
  Oxford / AGO
  LoE / GR
  5 D ++

- Weight intervention
  (if BMI <18.5 and >40)
  2a B +

- Reduction of dietary intake (at least 15 % calories from fat)
  in HR neg. breast cancer patients is associated with improved overall survival
  2b B +

- Avoid Smoking
  (bc related mortality 2 x and BC unrelated mortality 4 x elevated)
  2b B ++

- Reduce alcohol consumption below 6 g/d
  2b B +

- Moderate sport intervention when physical activity was reduced before
  1b A ++
Follow-up Objectives Reported by Patients

- Examination of the breast
- Reassurance
- Guidance of patients, answering questions
- Evaluation of treatment and treatment of side effects
- Psychosocial support

Oxford LoE 4 C
Routine Follow-Up Examinations in Asymptomatic Patients

Tests:

- History (specific symptoms)
- Physical examination
- Breast self-examination
- Mammography
- Sonography of the breast
- Routine MRI of the breast
- MRI of the breast in case of inconclusive conventional imaging
- Pelvic examination
- DXA-scan at baseline and repeat scan according to individual risk in women with premature menopause or women taking an AI

Oxford / AGO LoE / GR

<table>
<thead>
<tr>
<th>Test</th>
<th>Grade</th>
<th>Evidence Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>History (specific symptoms)</td>
<td>1a</td>
<td>A++</td>
</tr>
<tr>
<td>Physical examination</td>
<td>1a</td>
<td>B+</td>
</tr>
<tr>
<td>Breast self-examination</td>
<td>5</td>
<td>D+</td>
</tr>
<tr>
<td>Mammography</td>
<td>1a</td>
<td>A++</td>
</tr>
<tr>
<td>Sonography of the breast</td>
<td>2a</td>
<td>B+</td>
</tr>
<tr>
<td>Routine MRI of the breast</td>
<td>3a</td>
<td>B +/-</td>
</tr>
<tr>
<td>MRI of the breast in case of inconclusive conventional imaging</td>
<td>3b</td>
<td>B+</td>
</tr>
<tr>
<td>Pelvic examination</td>
<td>5</td>
<td>D++</td>
</tr>
<tr>
<td>DXA-scan at baseline and repeat scan</td>
<td>5</td>
<td>D</td>
</tr>
</tbody>
</table>
## Routine Follow-Up Examinations in Asymptomatic Patients

<table>
<thead>
<tr>
<th>Examination</th>
<th>Oxford / AGO LoE / GR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine biochemistry (incl. tumor markers)</td>
<td>1a A -</td>
</tr>
<tr>
<td>Ultrasound of the liver</td>
<td>1a A -</td>
</tr>
<tr>
<td>Bone scan</td>
<td>1a A -</td>
</tr>
<tr>
<td>Chest X-ray</td>
<td>1a A -</td>
</tr>
<tr>
<td>CT of chest, abdomen and pelvis</td>
<td>2a D -</td>
</tr>
<tr>
<td>Detection of isolated / circulating tumor cells</td>
<td>2a D -</td>
</tr>
<tr>
<td>PET</td>
<td>2b B -</td>
</tr>
<tr>
<td>Whole body MRI</td>
<td>2b B -</td>
</tr>
</tbody>
</table>

**Guidelines Breast**

Version 2017.1

© AGO e.V.
in der DGGG e.V.
sowie
in der DKG e.V.

[wwwago-online.de](http://wwwago-online.de)

---

**Further Information**

**References**
Local recurrence & in-breast recurrence:

- Incidence 7–20% *(depending on time of F/U)*
- Breast self-examination
- Physical examination, mammography & US
- Magnetic resonance imaging (MRI)
Contralateral breast cancer:

- Rel. risk: 2.5–5
- Incidence: 0.5–1.0 % / year
- Breast self-examination
- Physical examination, mammography & US
- Routine breast MRI
Early Detection of Potentially Curable Events

Unrelated site carcinoma:

- Colon RR 3.0; endometrium RR 1.6
- Ovary RR 1.5; lymphoma RR 7

- Screening for secondary malignancies according to current guidelines

- Pelvic examination and PAP smear

- Routine endometrial ultrasound / biopsy

Oxford / AGO LoE / GR

5 D ++

5 D ++

1b B -
# Follow-Up Care for Breast Cancer

### Recommendations for asymptomatic pts.
(modified ASCO-ACS guidelines 2016, NCCN 2.2016 guidelines and S3 national German guideline 2012)

<table>
<thead>
<tr>
<th>Clinical follow-up</th>
<th>Follow-Up*</th>
<th>Screening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years after primary therapy</td>
<td>1 2 3</td>
<td>4 5</td>
</tr>
<tr>
<td>History, physical examination, counseling</td>
<td>inv.: every 3 months</td>
<td>inv.: every 6 months</td>
</tr>
<tr>
<td>Self-examination</td>
<td></td>
<td>monthly</td>
</tr>
<tr>
<td>Imaging modalities and biochemistry</td>
<td>indicated only by complaints, clinical findings or suspicion of recurrence</td>
<td></td>
</tr>
<tr>
<td>Mammo-graphy and additionally sono-graphy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCT**</td>
<td>ipsilat.: every 12 months</td>
<td>on both sides: every 12 months</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>contralateral every 12 months</td>
<td></td>
</tr>
</tbody>
</table>

* Continued follow-up visits if still on adjuvant treatment

** In pts with breast-conserving therapy (BCT): First mammography 1 year after initial mammography or at least 6 months after completion of radiotherapy
Breast Cancer Follow-up Duration and Breast Nurses

- **Duration of follow-up**
  - until 5 yrs
  - until 10 yrs

- **Surveillance by specialized breast nurses**

Oxford / AGO
LoE / GR

- **1c A ++**
- **1c A +**
- **2b B +/-**

*Studies recommended*
Intrinsic typing of breast cancer leads to subgroups with different course of disease. Thus, postoperative surveillance should be adapted to specific time-dependent hazards of recurrence.

ER-positive patients have stable risk over many years requiring long term surveillance.

However, patients with HER2-positive disease and TNBC have more risk in the early phase of follow-up and should therefore receive more intense surveillance in the first years of follow-up.
Breast Cancer Follow-Up (2/16)

No further information

No references
Breast Cancer Follow-Up, Objectives I (3/16)

No further information

References:


Statement: Psycho-social aspects


Statement: risk factors of mortality after loco-regional recurrence

References:

Statement: Obesity, physical activity and quality of life


Statement: Obesity and breast cancer prognosis


Statement: Lymphedema

Statement: sexual disorders and cognitive impairment:


Breast Cancer Follow-Up, Objectives III (5/16)

No further information

References:

Statement: Re-evaluation of current adjuvant therapy
Expert opinion Organkommission

Statement: Monitoring of compliance


2. Neven P, Markopoulou C, Tanner MME et al.: The Impact of Educational Materials on Compliance and Persistence with Adjuvant Aromatase Inhibitors: 2 Year Follow-Up and Final Results from the CARIATIDE Study. SABCS 2011 [P5-16-02].


Statement: Early Detection of Distant Disease

Breast Cancer Follow-Up, Objectives (6/16)

No further information

References:

Statement: Early Detection


Statement: Psycho-social aspects

Statement: prophylactic surgery

Breast Cancer Follow-Up, Objectives (7/16)

No further information

References:

Statement: Early Detection


Statement: Psycho-social aspects


Statement: for all statements see most recent literature see at Survivorship care guidelines of ASC and ASCO

Weight intervention

Moderate sport intervention when physical activity was reduced
Follow-up Objectives – Reported by Patients (8/16)

No further information

References:

Routine Follow-Up Examinations in Asymptomatic Patients (9/16)

No further information

References:

Statement: History (specific symptoms)


Statement: Physical examination


Statement: Breast self-examination

Expert Opinion

Statement: Mammography

Statement: Sonography of the breast


Statement: MRI of the breast in case of inconclusive conventional imaging

Statement: Pelvic examination

Expert Opinion


Statement: Dexa scan

Expert Opinion

Routine Follow-Up Examinations in Asymptomatic Patients (10/16)

No further information

References:

Statement: Magnetic resonance imaging (MRI) of the breast


Statement: Routine biochemistry (incl. tumor markers)

Statement: Ultrasound of the liver


Statement: Bone scan

Statement: Chest X-ray


Statement: CT of chest, abdomen and pelvis

Statement: Detection of isolated/circulating tumor cells


Statement: PET


Statement: Whole body MRI


Early Detection of Potentially Curable Events (11/16)

No further information

References:

Statement incidence


Statement breast self examination

Statement physical examination, mammography & US


Early Detection of Potentially Curable Events (12/16)

No further information

References:

Statement risk and incidence


Statement breast self examination

Statement physical examination, mammography & US


Statement: Risk according to intrinsic subtype

Early Detection of Potentially Curable Events (13/16)

No further information

References:

Statement: Risk


Statement: Screening for secondary malignancies according to current guidelines

Statement: Pelvic examination and PAP smear


Statement: Endometrial ultrasound / biopsy

Statement: Marrow neoplasms after adjuvant breast cancer therapy

Follow-Up Care for Breast Cancer (14/16)

No further information

References:

Breast Cancer Follow-up – Duration and Breast Nurses (15/16)

No further information

References:

Luminal-like, HER2-positive and Triple-negative Breast Cancer Patients (16/16)

No further information

References:
