Breast Cancer
Follow-Up
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Follow-Up

- **Versionen 2002–2017:**
  Bauerfeind / Bischoff / Blohmer / Böhme /
  Costa / Diel / Friedrich / Gerber / Hanf / Heinrich /
  Huober / Janni / Kaufmann / Kümmel / Lux /
  Maass / Möbus / Mundhenke / Oberhoff /
  Rody / Scharl / Solomayer / Thomssen

- **Version 2018:**
  Müller-Schimpfle / Solbach
Breast Cancer Follow-Up Objectives

<table>
<thead>
<tr>
<th><strong>Early detection of curable events</strong></th>
<th><strong>Oxford LoE</strong></th>
<th><strong>GR</strong></th>
<th><strong>AGO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>In-breast recurrence</td>
<td>1a</td>
<td>B</td>
<td>++</td>
</tr>
<tr>
<td>Loco-regional recurrence*</td>
<td>1a</td>
<td>B</td>
<td>++</td>
</tr>
</tbody>
</table>

* 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


Statement: risk factors of mortality after loco-regional recurrence
Breast Cancer Follow-Up
Objectives

- Improve quality of life
- Improve physical performance
- Reduce therapy related side effects such as osteoporosis, cardiac failure, fatigue, neurotoxicity, lymphedema, sexual disorders, cognitive impairment
- Participation in interventional programmes during follow-up for breast cancer survivors to maximise therapy adherence, assess live-style interventions and improve quality of life

<table>
<thead>
<tr>
<th>Oxford LoE</th>
<th>GR</th>
<th>AGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2b</td>
<td>B</td>
<td>+</td>
</tr>
<tr>
<td>2a</td>
<td>B</td>
<td>+</td>
</tr>
<tr>
<td>2b</td>
<td>B</td>
<td>+</td>
</tr>
<tr>
<td>3b</td>
<td>B</td>
<td>+</td>
</tr>
</tbody>
</table>

Statement: Outcome measurements


Statement: Obesity, physical activity and quality of life


Statement: sexual disorders and cognitive impairment:
Evaluation of current adjuvant therapy


2. Lueck H-J, Hadji P, Harbeck N et al.. 24 Months Follow-Up Results from PACT (Patient’s Anastrozole Compliance to Therapy Programme), a Non-Interventional Study Evaluating the Influence of a Standardized Information Service on Compliance in Postmenopausal Women with Early Breast Cancer. SABCS 2011 [P5-17-05].


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### Evaluation of current adjuvant therapy

- incl. monitoring of adherence with endocrine therapies

### Pro-active improvement of adherence with therapy

- Patient information about efficacy data of 5-10 years endocrine therapy
- Early therapy of side effects (sports, NSAIDs, vitamin D / calcium)

<table>
<thead>
<tr>
<th></th>
<th>Oxford LoE</th>
<th>GR</th>
<th>AGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of current adjuvant therapy</td>
<td>2b</td>
<td>B</td>
<td>++</td>
</tr>
<tr>
<td>Pro-active improvement of adherence with therapy</td>
<td>5</td>
<td>D</td>
<td>++</td>
</tr>
</tbody>
</table>
Nov 8;12(11):e0187165.
Breast Cancer Follow-Up Objectives

- Psycho-social aspects of support and counseling
  - Pregnancy, contraception, sexuality, quality of life, menopausal symptoms, fear of recurrence
- Second opinion on primary therapy
- General counseling (genetics, HRT, prophylactic surgery, breast reconstruction)

<table>
<thead>
<tr>
<th>Oxford</th>
<th>LoE</th>
<th>GR</th>
<th>AGO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>C</td>
<td>+</td>
</tr>
<tr>
<td>2c</td>
<td>B</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>2c</td>
<td>C</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

Statement: Psycho-social aspects


Statement: prophylactic surgery
1. Rhiem K, Engel C, Graeser M et al.. The risk of contralateral breast cancer in patients from BRCA ½ negative high risk families as compared to patients from BRCA1 or BRCA2 positive families: a retrospective cohort study. Breast Cancer Res. 2012; 14(6): R156.
Breast Cancer Follow-Up Objectives

Lifestyle risks and comorbidity interventions that reduce unfavorable progression of disease.

- Treatment of type II-diabetes
  (> 25% undetected DM in postmenopausal BC patients)
  (LoE 5, GR D, AGO++)
- Weight intervention
  (if BMI < 18.5 and > 40)
  (LoE 2a, GR B, AGO+)
- Nightly fastening > 13h
  (LoE 2b, GR B, AGO+)
- Reduction of dietary intake (at least 15% calories from fat)
  in HR neg. breast cancer patients is associated with improved overall survival
  (LoE 2b, GR B, AGO+)
- Smoking cessation (mortality increased 2 fold, mortality not directly BC associated 4 fold increase)
  (LoE 2b, GR B, AGO++)
- Alcohol consumption reduction (below 6g/d)
  (LoE 2b, GR B, AGO+)
- Moderate sport (in patients with reduced physical activity prior to diagnosis)
  (LoE 1b, GR A, AGO++)
- Disstress reduction
  (LoE 3b, GR B, AGO+)


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
Nightly fasting

Prolonged nightly fasting improves prognosis in breast cancer patients
retrospective cohort study:
2413 BC-pat. (no diabetes), nightly fasting more or less than 13 hrs
Fasting < 13 hrs: HR 1.36, 36% increase of risk for recurrence
HR 1.21, n.s. increase of risk for mortality
every 2-hrs-prolonged fasting was correlated with a 20% increase of sleeping duration


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

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  
- DEKA-scan at baseline and repeat scan according to individual risk in women with premature menopause or women taking an AI

* Consider in case of increased risk (age <50y, HR neg., diagnostic assessability C/D in mammography + ultrasound)


Statement: Physical examination


1;3(11):1495-1502.


Statement: Pelvic examination  Expert Opinion


Statement: Deka scan  Expert Opinion


Statement: Magnetic resonance imaging (MRI) of the breast


Statement: Routine biochemistry (incl. tumor markers)

Early Detection of Potentially Curable Events

Local recurrence & in-breast recurrence:
- Incidence 7–20% (depending on time of F/U)
  - Breast self-examination: 5 D +
  - Physical examination, mammography & US: 1a A ++
  - Magnetic resonance imaging (MRI)*: 3a B +/-

* Consider in case of increased risk (age <50y, HR neg., diagnostic assessability C/D in mammography + ultrasound)

Statement incidence

Statement breast self examination

Statement physical examination, mammography & US & MRI
Statement risk and incidence


Statement breast self examination


Statement physical examination, mammography & US&MRI


Statement: Risk


Statement: Screening for secondary malignancies according to current guidelines


Statement: Pelvic examination and PAP smear


Statement: Marrow neoplasms after adjuvant breast cancer therapy

Follow-Up Care for Breast Cancer

Recommendations for asymptomatic pts.

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

<table>
<thead>
<tr>
<th>Duration of follow-up</th>
<th>Oxford</th>
<th>LoE</th>
<th>GR</th>
<th>AGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>until 5 yrs</td>
<td>1c</td>
<td>A</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>until 10 yrs</td>
<td>1c</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Surveillance by specialized breast nurses</td>
<td>2b</td>
<td>B</td>
<td>+/-*</td>
<td></td>
</tr>
</tbody>
</table>

*Studies recommended*


Luminal-like, HER2-positive and Triple-negative Breast Cancer Patients

- Intrinsic typing of breast cancer leads to the development of subgroups with different courses of disease.
- Postoperative surveillance should be tailored to specific breast cancer type and their associated time periods of recurrence.
- ER-positive patients have a stable risk of recurrence of multiple years. Long term surveillance is recommended.
- In contrast, patients with HER2-positive disease and TNBC have an increased risk of recurrence in the early follow up phase. Surveillance should be adjusted accordingly.