

# Mammakarzinom des Mannes: was wir (nicht) wissen

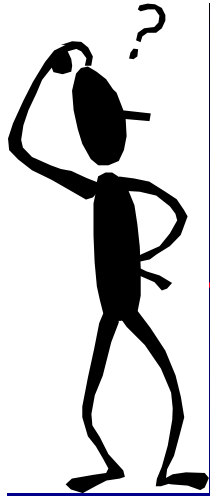


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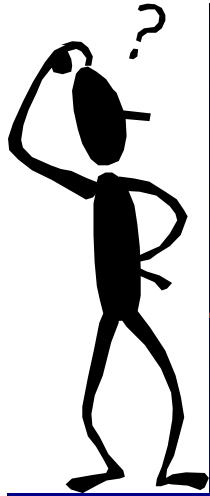
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Klinikum rechts der Isar  
Direktorin: Prof. Dr. M. Kiechle





# Mammakarzinom des Mannes

- Epidemiologie
- Diagnostik
- Tumorstadium / Histologie
- Primärtherapie: Operation / Bestrahlung
- Adjuvante Systemtherapie
- Fortgeschrittenes Mammakarzinom
- Literatur / AGO Leitlinien

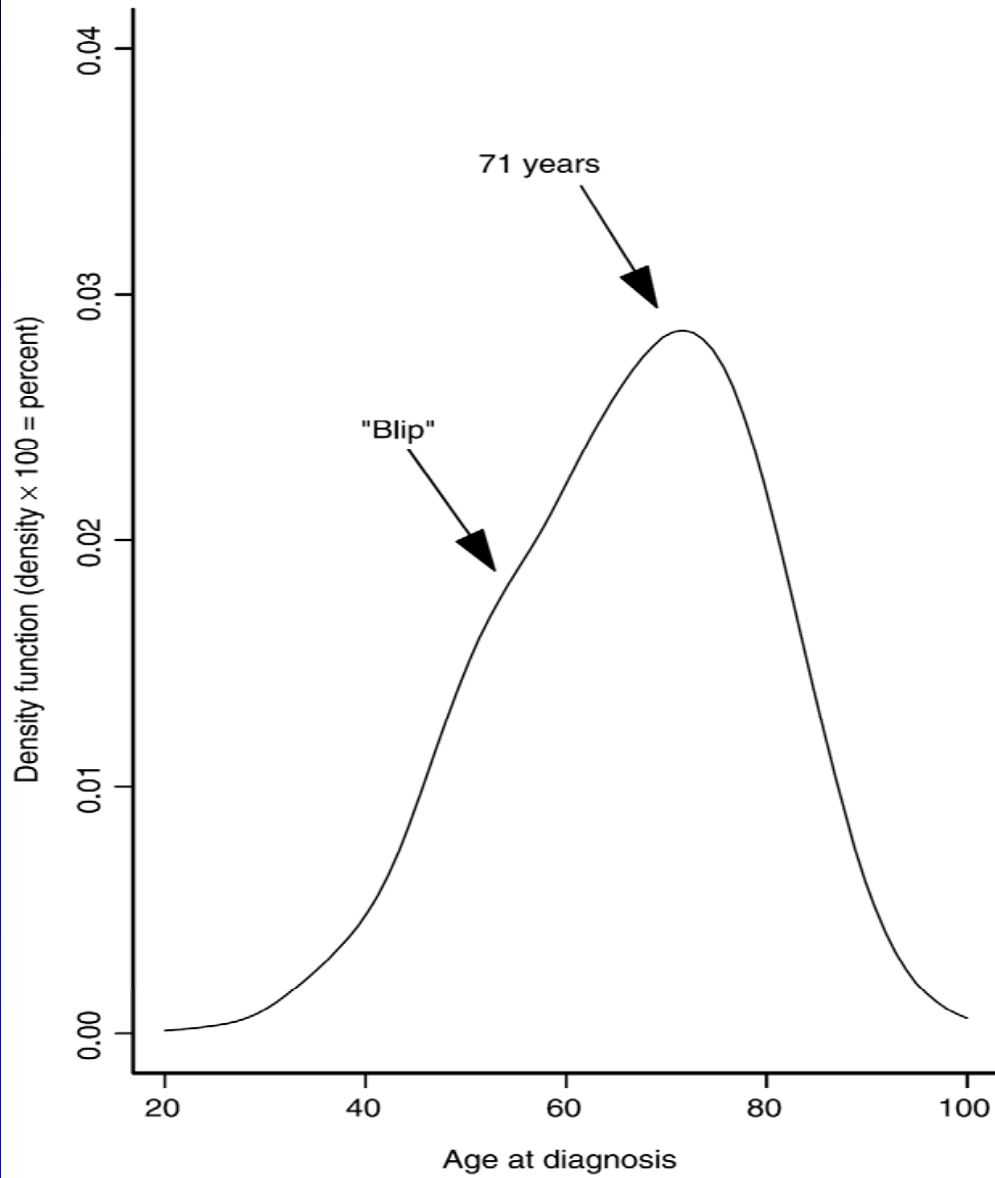


# Mammakarzinom des Mannes: Epidemiologie

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- Jährliche Inzidenz: 1 / 100,000
- 1% der Mammakarzinom-Fälle
- Geographische und ethnische Unterschiede:
  - Uganda (5%), Zambia (15%)
  - Jüdische Amerikaner 2-3 / 100,00 pro Jahr
- Familiäre Belastung (BRCA2 Mutation)
- Altersgipfel: 10 Jahre später als bei Frauen

Males ( $n = 1,456$ )



Females ( $n = 216,064$ )

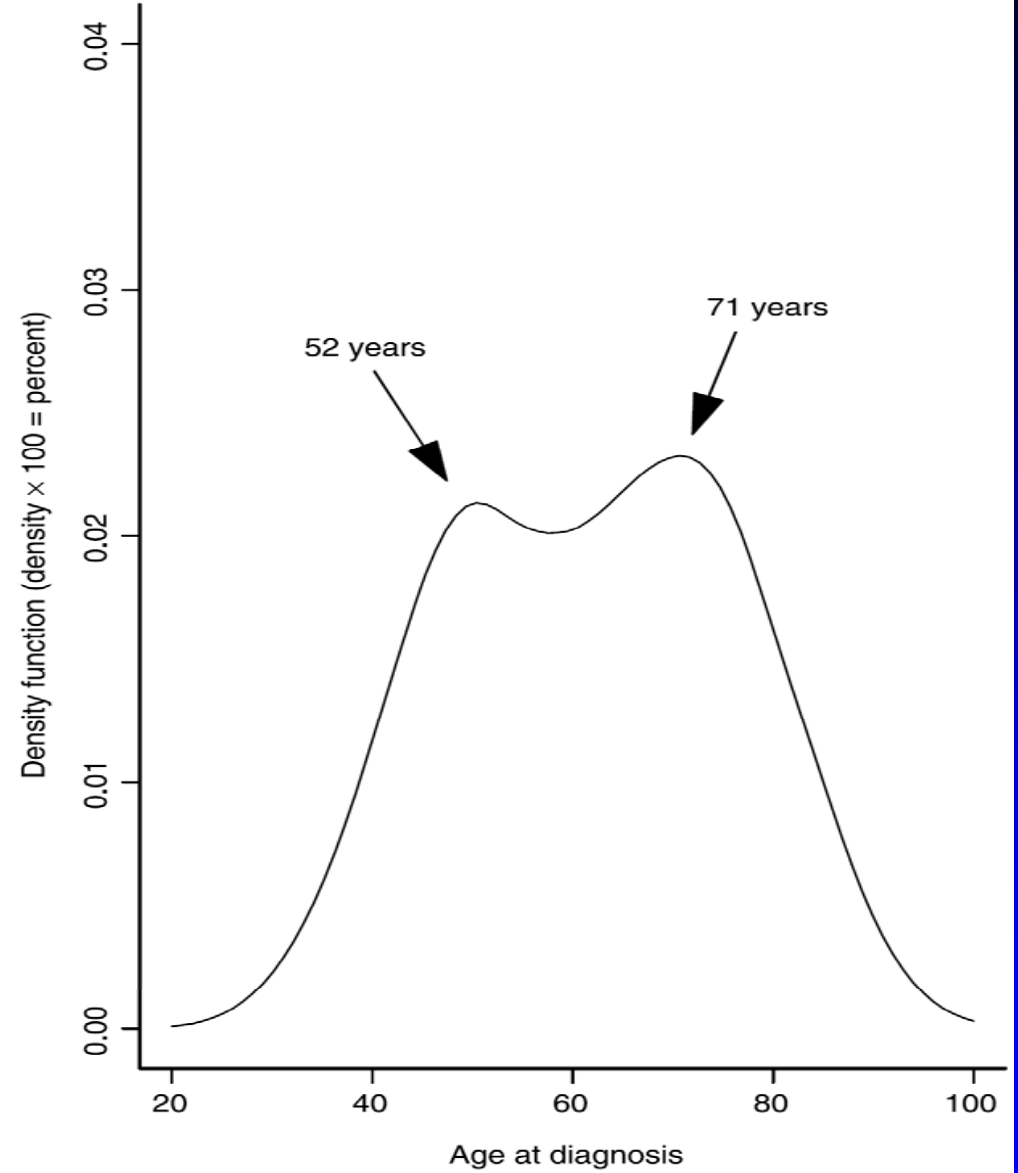
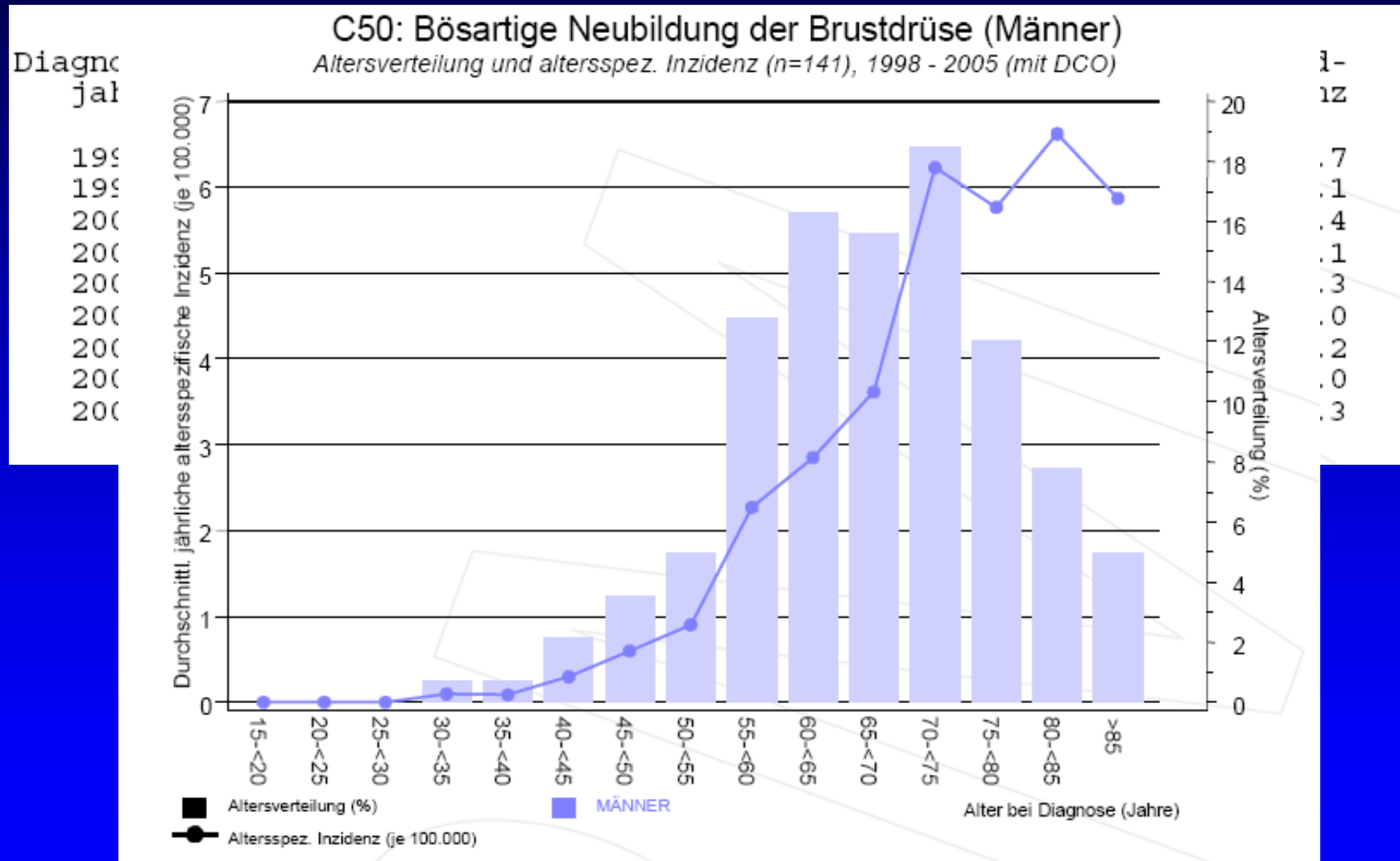


Figure 3. Age-frequency distribution function derived from SEER's 12 registries for male and female breast cancers, collected during the years 1992–2000.

# Mammakarzinom des Mannes: Inzidenz



# Who Should be Tested for BRCA1/2 Mutations?

**Oxford LoE: 2b      GR: B      AGO: ++**

## **Families with\***

**at least two women with breast cancer, one < 51 yrs**

**at least one woman affected by breast and one by ovarian cancer**

**at least one woman affected by breast and ovarian cancer**

**at least two women affected by ovarian cancer**

**at least one woman affected by bilateral breast cancer < 51 yrs**

**at least one woman affected by breast cancer < 36 yrs**

**at least one man affected by breast cancer and one additional relative  
affected by breast or ovarian cancer**

**\*Inclusion criteria of the German Consortium of Hereditary Breast and Ovarian Cancer (GCHBOC)  
based on a mutation detection rate  $\geq 10\%$**



# Mammakarzinom des Mannes: Klinisches Erscheinungsbild

- Schmerzloser Knoten in 75 %, früh: Mamillenbeteiligung
- CAVE: Diagnoseverschleppung !
  - Im Mittel: 29 Mon. (1945) → 21 Mon. (1995) → 6-10 Mon.
- 90 % invasiv duktale Karzinome
- Tumorbiologie wie bei postmenopausalen Frauen (Hormonrezeptor-positiv)

Stage	Proportion
I	37%
II	21%
III	33%
IV	9%

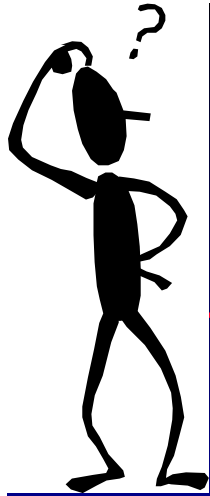
Table 3: TNM stage at presentation of male breast cancer

# Mammakarzinom des Mannes

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# Mammakarzinom des Mannes: Therapie

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- Literatur:
  - retrospektive Datensammlungen
  - Fallberichte
- Es fehlen prospektive, randomisierte Studien !

## Table 4. Treatment modalities: surgical procedures (%).

Ref.	BCS	BCS+RT	TM	MRM	RM
Stierer [18]	9	4	13	66	8
Borgen [31]	1	–	5	67	27
Donegan [8]	2	–	–	89	9
Cutuli [9]	5	8	9	63	15
Giordano [29]	–	–	14	55	31

BCS: Breast-conserving surgery; MRM: Modified radical mastectomy;

RM: Radical mastectomy; RT: Radiation therapy; TM: Total mastectomy.

**Mastectomy is the most common, recommended, surgical procedure**

# Mammakarzinom des Mannes



Table I. Local recurrence rate after post-operative radiotherapy reported in the literature.

Ref.	No. of patients	No. of patients treated with post-operative RT	Local relapse in irradiated patients (%)	Local relapse in non-irradiated patients (%)
Cutuli <i>et al</i> (77)	397	190/373 <sup>a</sup>	9/190 (4.7)	21/183 (11.5)
Willsher <i>et al</i> (82)	43	10/40 <sup>a</sup>	1/10 (10)	8/30 (27)
Stranzl <i>et al</i> (73)	31	13/31 <sup>a</sup>	1/31 (3)	-
Vinod <i>et al</i> (74)	24	11/24 <sup>a</sup>	1/11 (9)	1/8 (12.5)
Chung <i>et al</i> (83)	16	5/8 <sup>a</sup>	0/5 (0)	2/3 (67)
Waugh <i>et al</i> (84)	12	12/12 <sup>a</sup>	0/12 (0)	-

RT, radiotherapy. <sup>a</sup>Number of patients who underwent surgery.

**Reviewed in Gennari R et al,  
Int J Oncology 24: 663-670, 2004**

**Due to more advanced stages post-operative radiotherapy should frequently be recommended to males, even after mastectomy**

# Male Breast Cancer: Diagnostic Work-Up and Loco-Regional Therapy



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

Guidelines Breast  
Version 2008.1.1

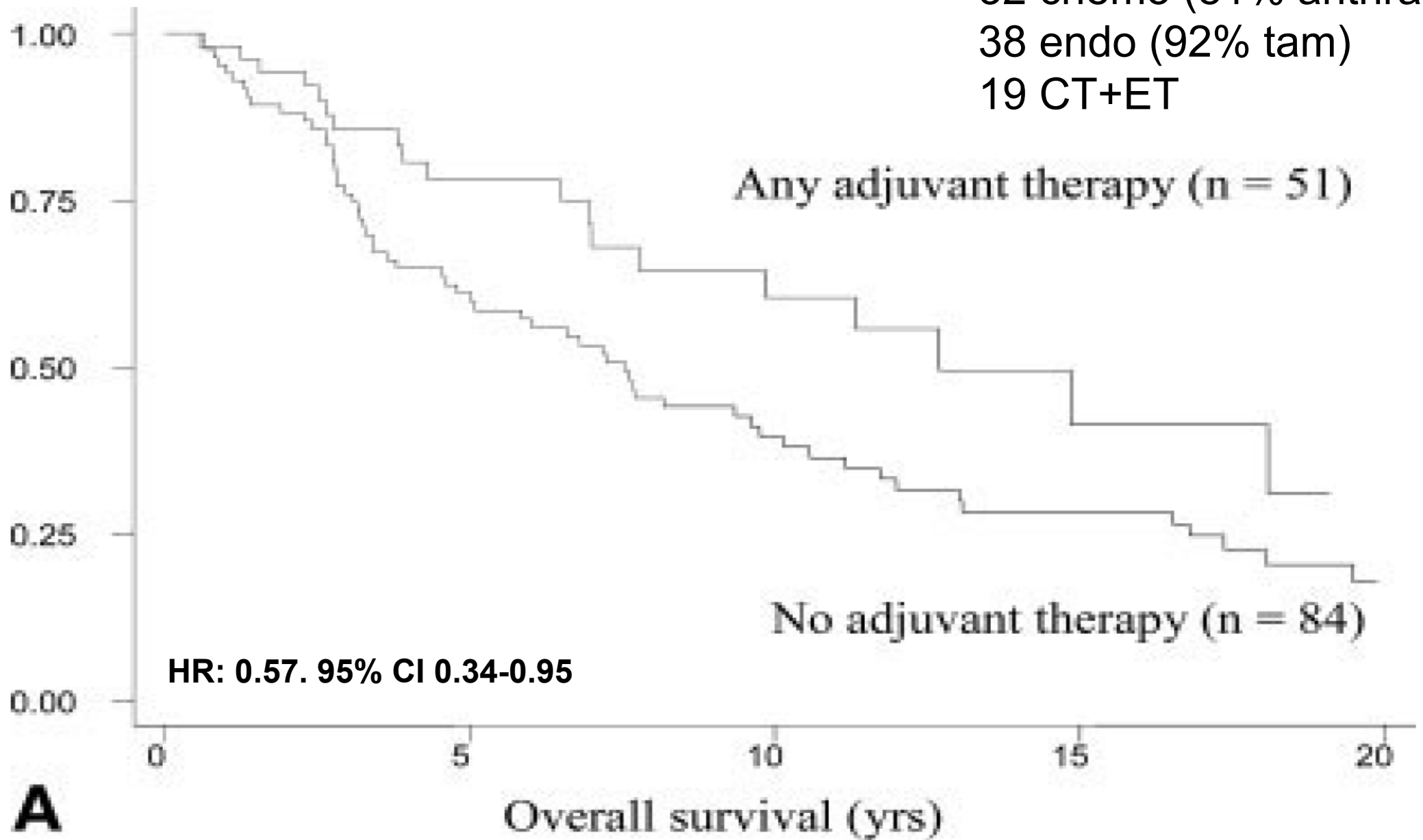
Oxford / AGO

LoE / GR

- |   |           |          |            |
|---|-----------|----------|------------|
| ➤ <b>Diagnostic work up as in women</b>                                 | <b>4</b>  | <b>C</b> | <b>+</b>   |
| ➤ <b>Mammography</b>  | <b>3c</b> | <b>C</b> | <b>+/-</b> |
| ➤ <b>Ultrasound</b>   | <b>2c</b> | <b>b</b> | <b>++</b>  |
| ➤ <b>Standard-surgery: Mastectomy</b>                                   | <b>4</b>  | <b>C</b> | <b>++*</b> |
| ➤ <b>Sentinel-node excision (SNE)</b>                                   | <b>2b</b> | <b>B</b> | <b>+</b>   |
| ➤ <b>Radiotherapy as in women</b><br>(consider tumor breast relation !) | <b>4</b>  | <b>C</b> | <b>+</b>   |
| ➤ <b>Genetic counselling if 1 additional relative affected</b>          | <b>2b</b> | <b>B</b> | <b>++</b>  |

\* Registration study participation recommended

32 chemo (81% anthra)  
38 endo (92% tam)  
19 CT+ET



**A**

# Mammakarzinom des Mannes: Therapie

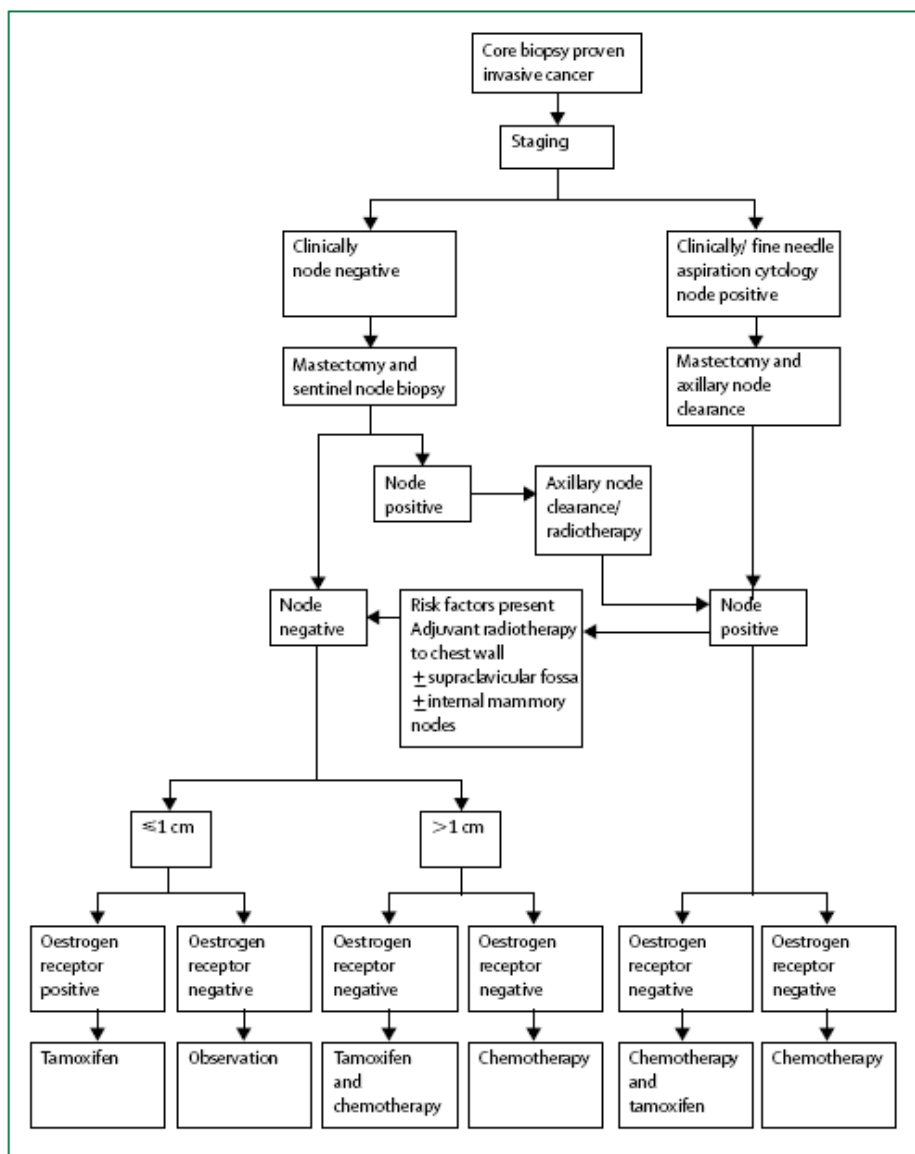


Figure 1: Treatment algorithm for operable male breast cancer

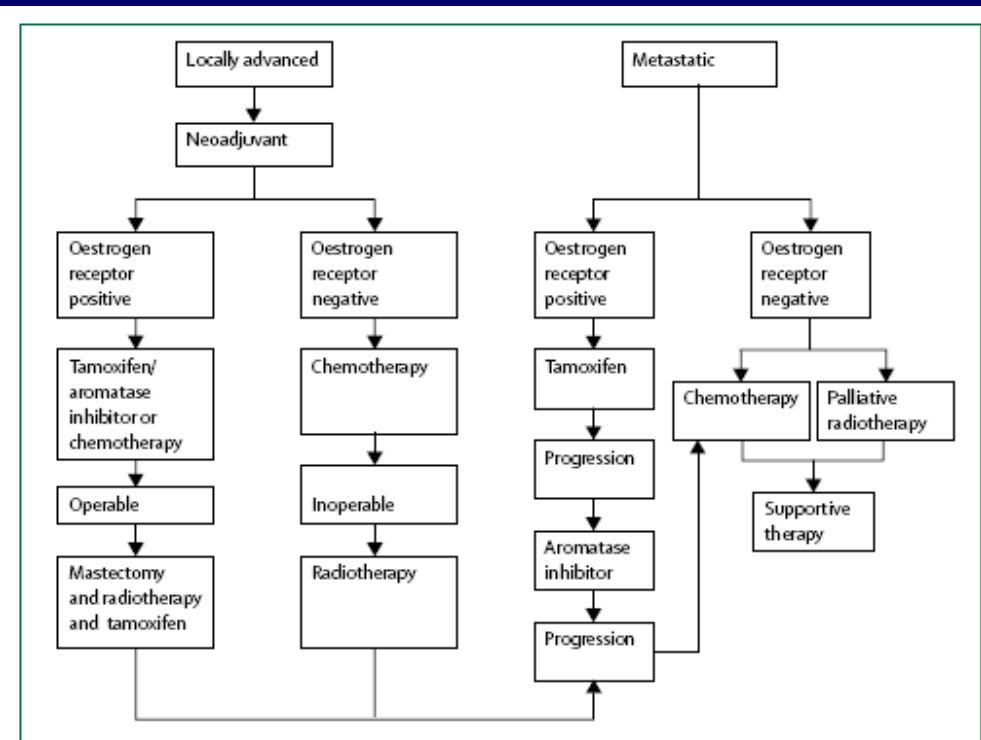


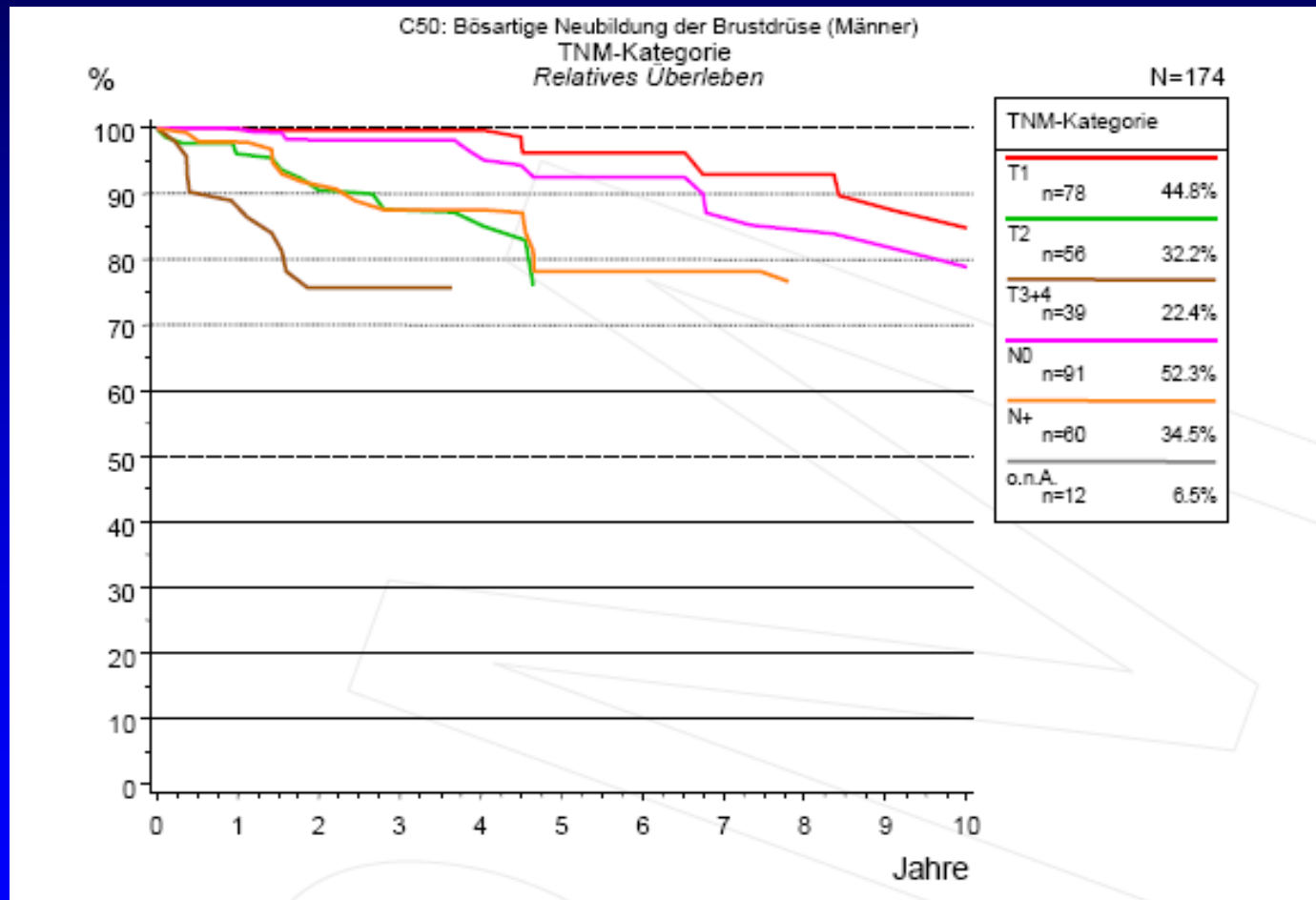
Figure 2: Treatment algorithm for inoperable male breast cancer

# Male Breast Cancer: Systemic Therapy

		Oxford / AGO LoE / GR	
➤ <b>Adjuvant chemotherapy as in women</b>	<b>2a</b>	<b>B</b>	<b>++</b>
➤ <b>Trastuzumab</b>	<b>5</b>	<b>D</b>	<b>+*</b>
➤ <b>Endocrine therapy</b>	<b>4</b>	<b>D</b>	<b>++</b>
- Tamoxifen	<b>4</b>	<b>C</b>	<b>++</b>
- Aromatase inhibitors (adjuvant)	<b>4</b>	<b>D</b>	<b>-</b>
- Aromatase inhibitors (metastatic BC)	<b>4</b>	<b>C</b>	<b>+/-</b>
- GnRHa and AI (metastatic BC)	<b>4</b>	<b>C</b>	<b>+/-</b>
- Fulvestrant (metastatic BC)	<b>4</b>	<b>C</b>	<b>+/-</b>
➤ <b>Palliative chemotherapy as in women</b>	<b>4</b>	<b>C</b>	<b>++</b>



# Mammakarzinom des Mannes: Überleben



**... und wie geht es weiter ?**

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# MALE BREAST CANCER PROGRAM

BREASTINTERNATIONALGROUP

## OVERALL OUTLINE

- **PART 1:**  
**RETROSPECTIVE JOINT ANALYSIS** of all Male BC patients diagnosed and treated in the participating centers within the last 20 years, with retrospective collection of tumour blocks and analysis of tumour biology.
- **PART 2:**  
**PROSPECTIVE INTERNATIONAL REGISTRATION** of all Male BC cases, with simultaneous collection of biological material (tumour and blood whenever possible) through the EORTC Virtual Tumour Bank. Data will be collected by a web-based RDC (Remote Data Capture) system only. Algorithms for management of Male BC could be provided.
- **PART 3:**  
After 6 months to one year and depending on the number of patients registered in the system, an **ADJUVANT ENDOCRINE THERAPY TRIAL** could be proposed.



BREASTINTERNATIONALGROUP

# MALE BC SURVEY 2007-2008



## INTERESTED CENTRES

## NUMBER OF PATIENTS

ABCSG	21
GBECAM	246 – 261
BOOG	50
GOCCHI	TBC
EORTC	400
GBECAM	294-309
GECO Peru	30
GEICAM	65
GOCCHI	6
GOIRC	94-100
IBCSG	146-150
ICCG	4-5
JBCRG	28
NCIC – CTG (maybe)	TBC
NCRI BCSG (maybe)	TBC
SBCG	TBC
SOLTI	200
NKI NL	40
UNIVERSITY HOSPITAL MAASTRICHT	4
MAYO CLINIC/NCCTG	21
SWOG	15
NCI	24

RETROSPECTIVE PART 1

18 confirmed Groups/centers

PTS: 1616 to 1702



BREASTINTERNATIONALGROUP

# MALE BC SURVEY 2007-2008



## PROSPECTIVE PART

15 confirmed Groups/centers

Estimated No Pts:  
205 to 219 in 2 years

INTERESTED CENTRES	NUMBER OF PATIENTS (2 yrs)
ABCSG	7 -9
EORTC	20
GBECAM	61 - 63
GOCCHI	12 (unknown)
GOIRC	35 – 39
IBCSG	4 – 10 (unknown)
ICCG	2
SOLTI	26
NCIC – CTG (maybe)	TBC
NCRI BCSG (maybe)	TBC
NKI NL	8
UNIVERSITY HOSPITAL MAASTRICHT	2
MAYO CLINIC/NCCTG	4
SWOG	TBC
NCI	24

# Das Mammakarzinom des Mannes: Literatur

Breast Cancer Res Treat  
DOI 10.1007/s10549-006-9356-z

REVIEW PAPER

## Male breast cancer: a review of clinical management

A. Agrawal · A. A. Ayantunde · R. Rampaul ·  
J. F. R. Robertson

Review

### Expert Opinion

1. Introduction
2. Treatment of localised disease
3. Prognostic factors
4. Metastatic disease treatment
5. Special problems
6. Expert opinion

Seminar

## Strategies in treating male breast cancer

Bruno Cutuli

*Radiation Oncology Department, Polyclinique de Courclancy, 38 rue de Courclancy, 51100 Reims, France*

Male breast cancer is rare. Median age at diagnosis is ~ 65 years, and > 35% of male breast cancers occur in elderly men. Retroareolar lump is the most frequent symptom, and 25 – 30% of tumours are T<sub>4</sub> lesions. Infiltrating ductal carcinoma represents almost 90% of the cases, and 10% are ductal carcinoma *in situ*. Axillary nodal involvement is present in 50 – 60% of the cases. Estrogen and progesterone receptors are positive in 75 – 92% and 54 – 77% of the cases. Mastectomy with axillary dissection remains the standard treatment. Sentinel lymph node biopsy could be proposed in small tumours (≤ 2 cm). Locoregional radiotherapy is very often indicated. Tamoxifen is the standard adjuvant treatment, but chemotherapy is proposed in young men with axillary nodal involvement and/or negative hormone receptors. Tumour size and, more particularly, histopathological axillary involvement are the strongest predictive factors for both locoregional recurrence and metastasis. Globally, the prognosis is similar to that in women (at identical stage), but the intercurrent death rate is higher due to the important impact of comorbidities and second neoplasm.

**Keywords** adjuvant therapy, locoregional recurrence, male breast cancer, radiotherapy

*Expert Opin. Pharmacother.* (2007) 8(2):193–202

**Lancet 2006; 367: 595-604**

## Male breast cancer

Ian S Fentiman, Alain Fourquet, Gabriel N Hortobagyi

Occurrence of male breast cancer, a rare disease, peaks at age 71 years. Familial cases usually have *BRCA2* rather than *BRCA1*. *Lancet* 2006; 367: 595–604



# Mammakarzinom des Mannes

- Es fehlen randomisierte Studien !
- Therapie wie Mammakarzinom der Frau
- Endokrine Therapie: Tamoxifen = Therapie der Wahl
- Frühere Diagnosestellung wichtig: Information !
- Zukunft:
  - EORTC / BIG / TBCI: Registerstudie (Gewebeasservierung)
  - Prospektive Therapiestudie geplant (endokrine Fragestellung)
  - Teilnahme an Brustkrebsstudien ermöglichen (Stratum)

# Evidenzbasierte Brustkrebs-Therapie



Breast Care

Review Article · Übersichtsarbeit

Breast Care 2008;3:000-000  
DOI: 10.1159/000130825

Published online: 4/11/2008

## Male Breast Cancer

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[www.karger.com/brc](http://www.karger.com/brc)

Leitlinien für Diagnostik und Therapie, jährlich aktualisiert



AGO (DKG, DGGG)  
[www.ago-online.org](http://www.ago-online.org)

## Tumorzentrum München:

- ✓ Patientinnenratgeber Mammakarzinom
- ✓ Manual Mammakarzinom für Ärzte

<http://www.med.uni-muenchen.de/TZMuenchen/manuale.htm>

