Guidelines Breast
Version 2018.1D

ZNS-Metastasen beim Mammakarzinom

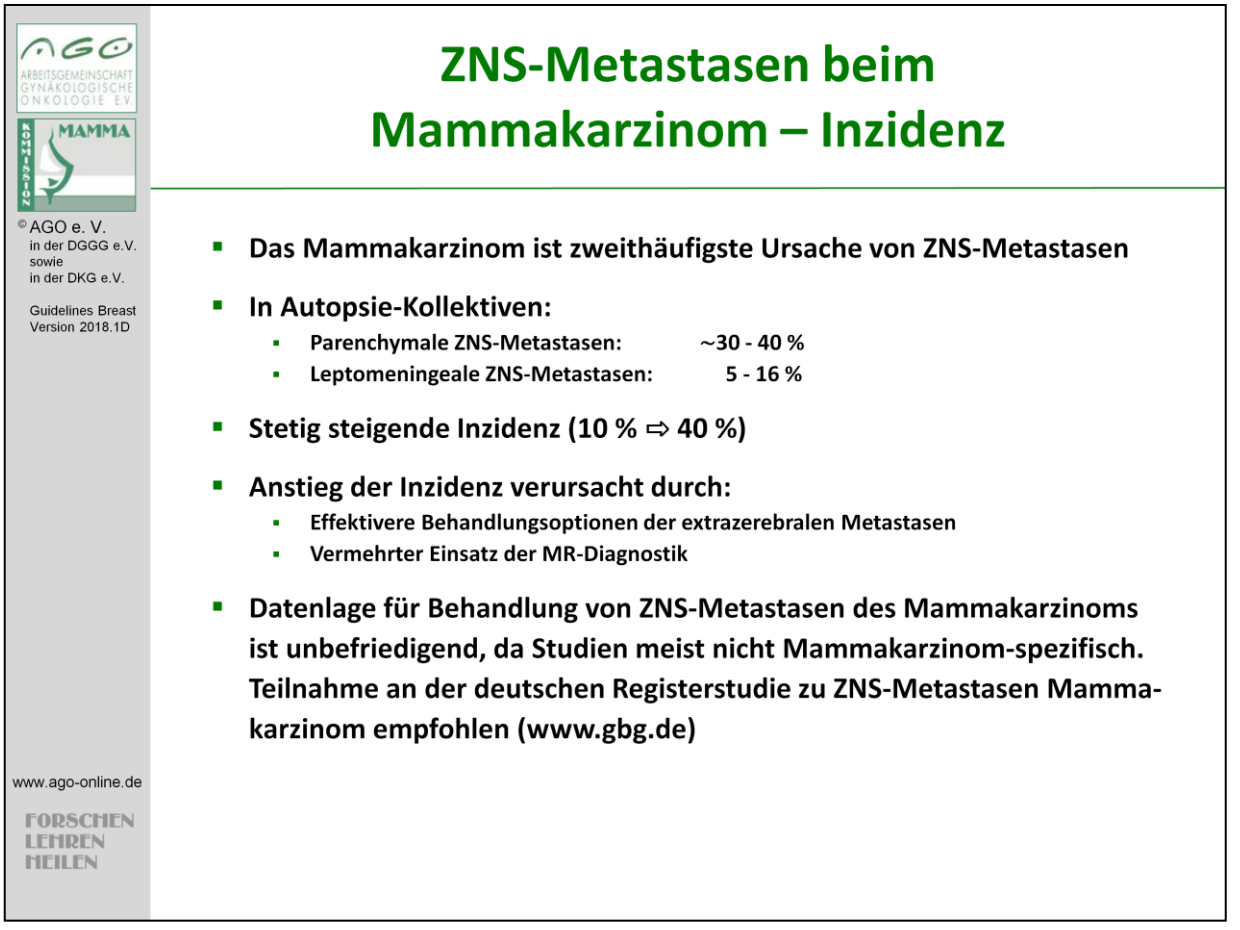
Guidelines Breast
Version 2018.1D

ZNS-Metastasen beim Mammakarzinom

- **Versionen 2003–2017:**
  Bischoff / Diel / Fehm / Friedrich / Gerber / Huober / Loibl / Lück / Maass / Müller / Nitz / Jackisch / Jonat / Junkermann / Rody / Schütz / Witzel

- **Version 2018:**
  Müller / Stickeler

  unter Mitarbeit von:
  Petra Feyer und Dirk Rades (DEGRO)



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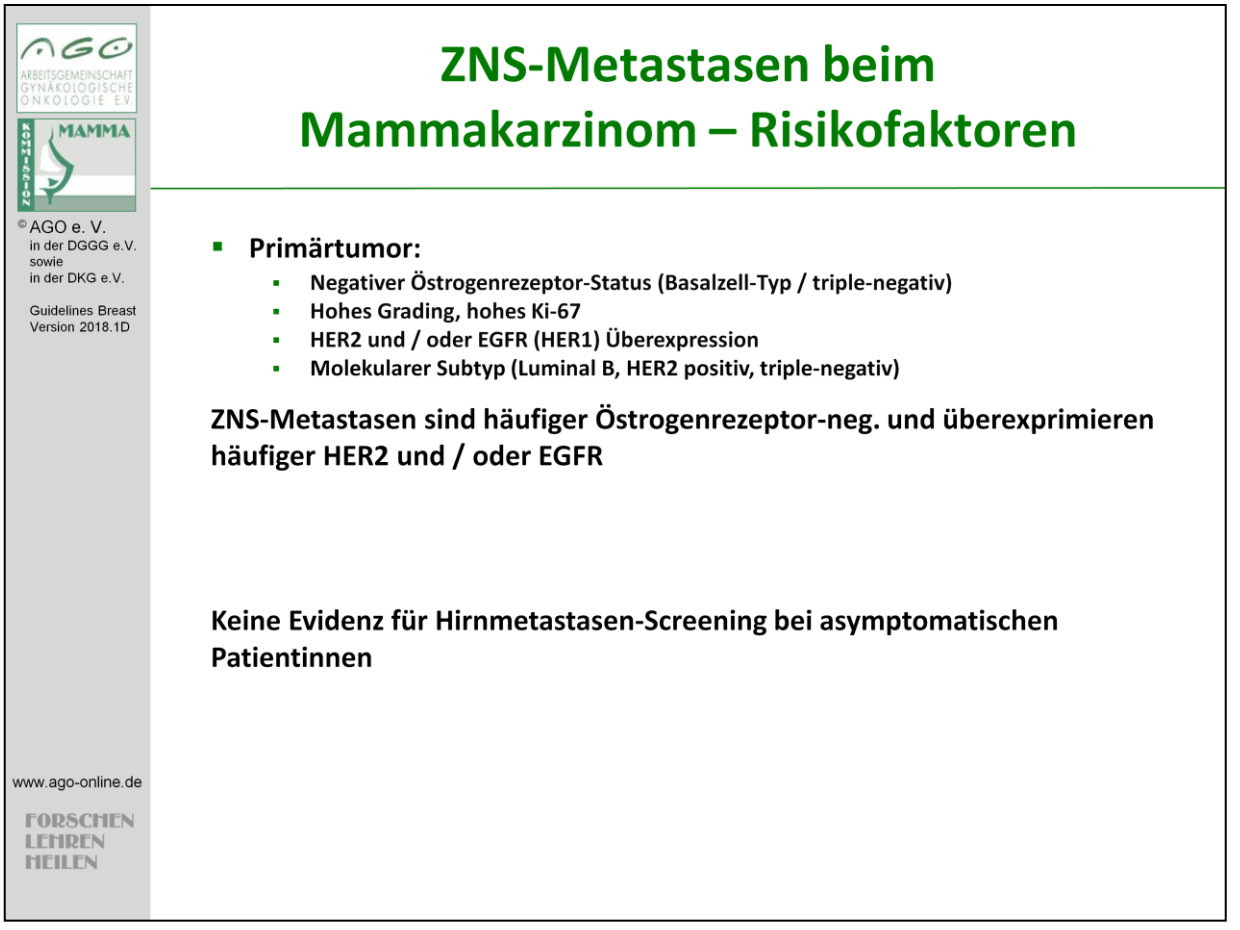

Risk factors (see also references slide CNS incidence)

1. Arslan UY, Oksuzoglu B, Aksoy S et al. Breast cancer subtypes and outcomes of central nervous system metastases. Breast. 2011;20(6):562-7.
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Brain metastases (BM) are more likely to be estrogen receptor negative, and overexpress HER2 or EGFR

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There is no evidence for BM-screening in asymptomatic BC-patients

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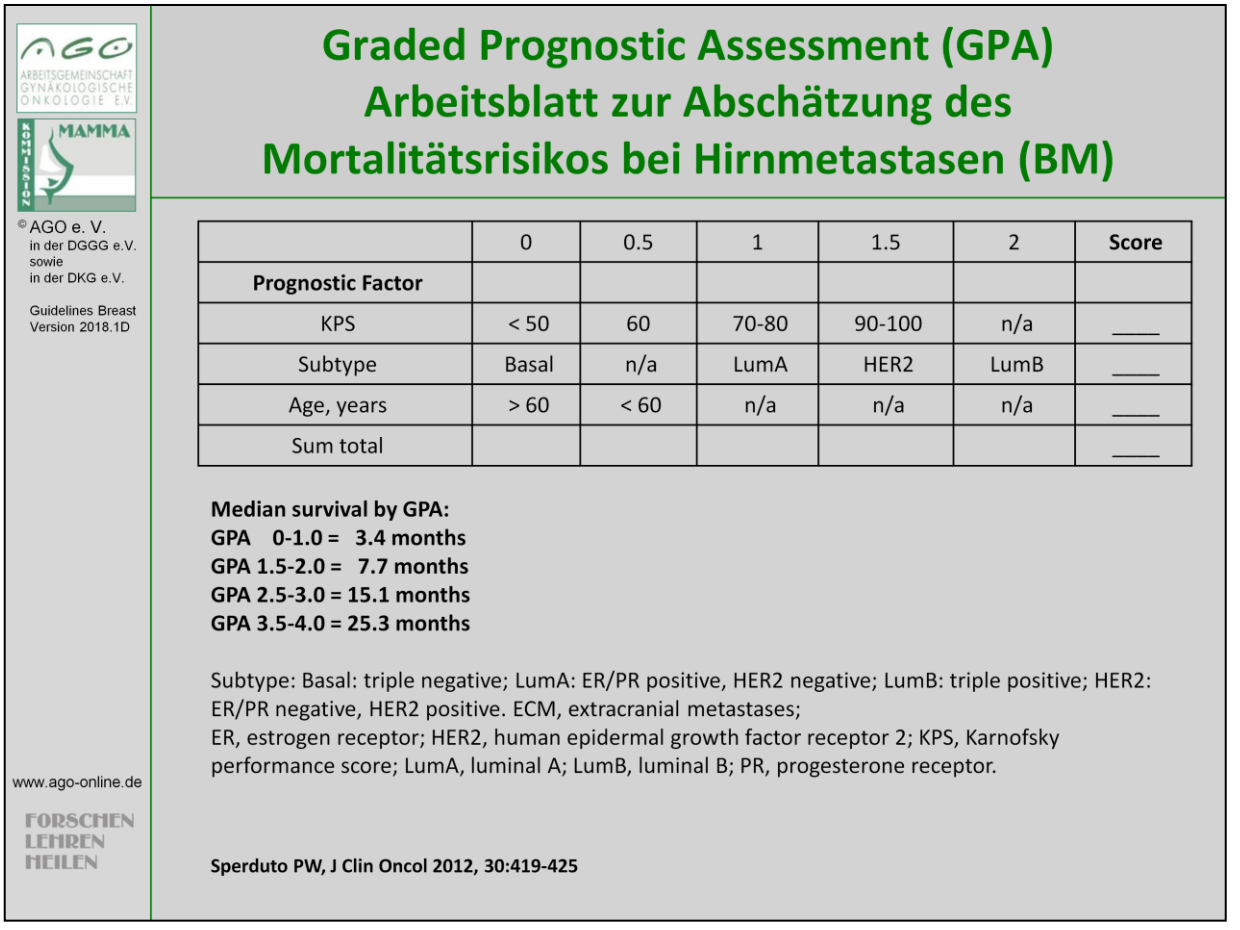

Graded Prognostic Assessment (GPA)
Arbeitsblatt zur Abschätzung des Mortalitätsrisikos bei Hirnmetastasen (BM)

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	0	0.5	1	1.5	2	Score
Prognostic Factor						
KPS	< 50	60	70-80	90-100	n/a	____
Subtype	Basal	n/a	LumA	HER2	LumB	____
Age, years	> 60	< 60	n/a	n/a	n/a	____
Sum total						____

Median survival by GPA:
GPA 0-1.0 = 3.4 months
GPA 1.5-2.0 = 7.7 months
GPA 2.5-3.0 = 15.1 months
GPA 3.5-4.0 = 25.3 months

Subtype: Basal: triple negative; LumA: ER/PR positive, HER2 negative; LumB: triple positive; HER2: ER/PR negative, HER2 positive. ECM, extracranial metastases;
ER, estrogen receptor; HER2, human epidermal growth factor receptor 2; KPS, Karnofsky performance score; LumA, luminal A; LumB, luminal B; PR, progesterone receptor.

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Breast-GPA

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Prognostic Factors for Survival

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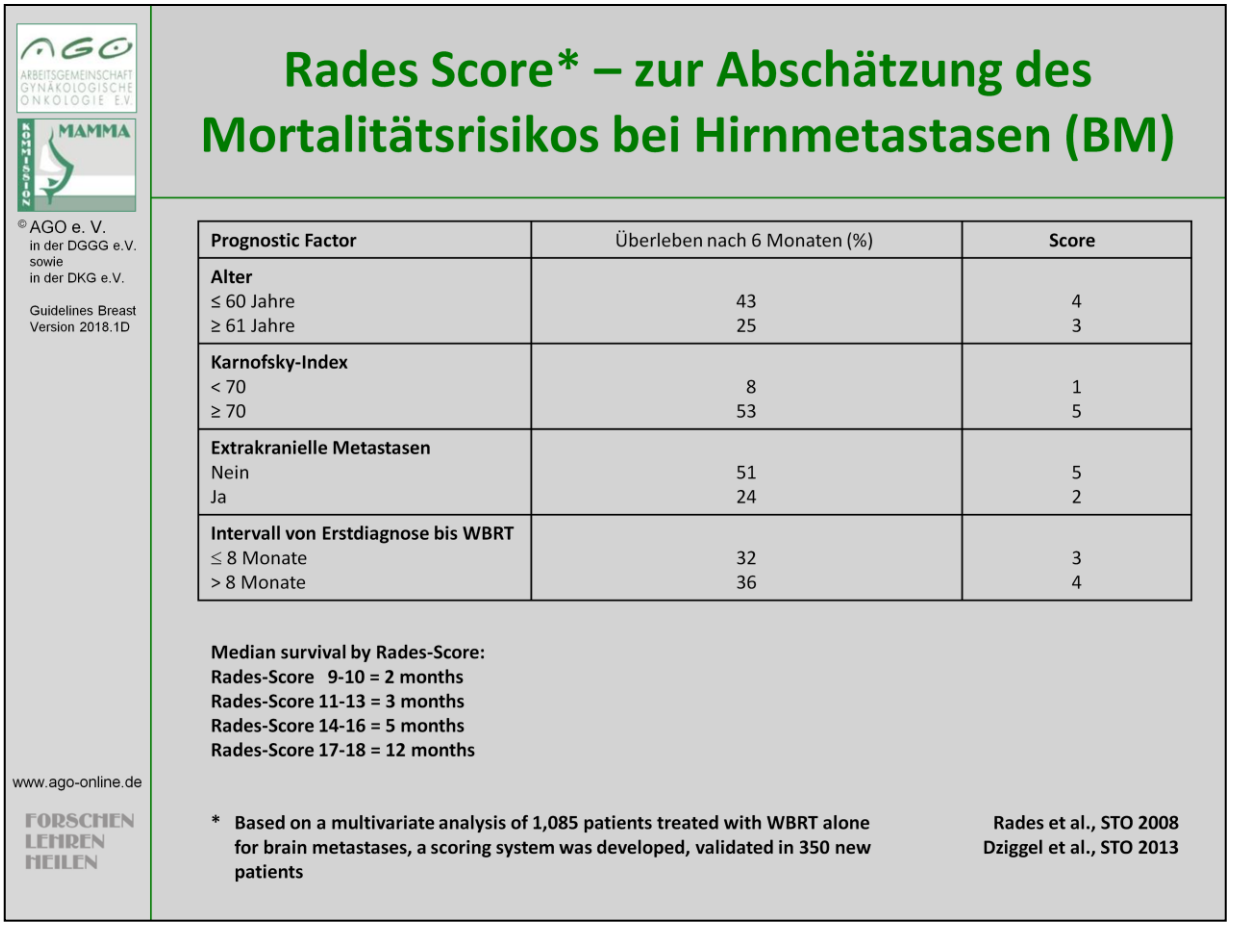

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Singuläre / solitäre Hirnmetastase

Guidelines Breast
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	Oxford LoE	GR	AGO
Alleinige Lokaltherapie: SRS (≤ 4cm) oder FSRT oder Resektion	2b	B	++
WBRT + Boost (SRS, FSRT) o. Resektion + WBRT	2a	B	++
Resektion + Bestrahlung des Tumorbetts (ohne WBRT)	2b	B	+
Alleinige WBRT*	2b	B	+
Hippocampusschonung	2b	C	+/-

- **SRS/FSRT o. Resektion + WBRT verbessert lokale Kontrolle und Symptomkontrolle, nicht das Überleben. WBRT führt zu größerer neurokognitiver Beeinträchtigung**
- **Bei neurochirurgischer Resektion Nachbestrahlung des Tumorbetts (alleinige lokale RT oder Boost bei WBRT) empfohlen. Resektion ohne Vorteil gegenüber einer Strahlentherapie. Entscheidungsfindung siehe Dia 11**

SRS = stereotactic radiosurgery (einzeitig)
FSRT = fractionated stereotactic radiotherapy
WBRT = whole brain radiotherapy

*** Patientinnen mit ungünstiger Prognose und/oder schlechtem Allgemeinzustand**

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from breast or non-small cell lung cancer. Cancer 2016 122(13): 2091-2100.

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Oligo-Hirnmetastasen

Guidelines Breast
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	Oxford		
	LoE	GR	AGO
Alleinige Lokaltherapie: SRS (≤ 4 cm) oder FSRT	2b	B	++
WBRT + Boost (SRS, FSRT)	2a	B	++
Alleinige WBRT*	2b	B	+
Hippocampusschonung	2b	C	+/-

- Die Zahl der stereotaktisch sinnvoll zu bestrahlenden Metastasen ist von Lokalisation, Größe und anderen Faktoren abhängig
- WBRT zusätzlich zu SRS/FSRT verbessert die lokale Kontrolle und Symptomkontrolle, nicht aber das Überleben. Gleichzeitig scheint bei zusätzlicher WBRT eine größere neurokognitive Beeinträchtigung aufzutreten
- Bei einer limitierten Anzahl von Hirnmetastasen Präferenz zur stereotaktischen Bestrahlung

SRS = stereotactic radiosurgery (einzeitig)
FSRT = fractionated stereotactic radiotherapy
WBRT = whole brain radiotherapy

* Patientinnen mit ungünstiger Prognose und/oder schlechtem Allgemeinzustand

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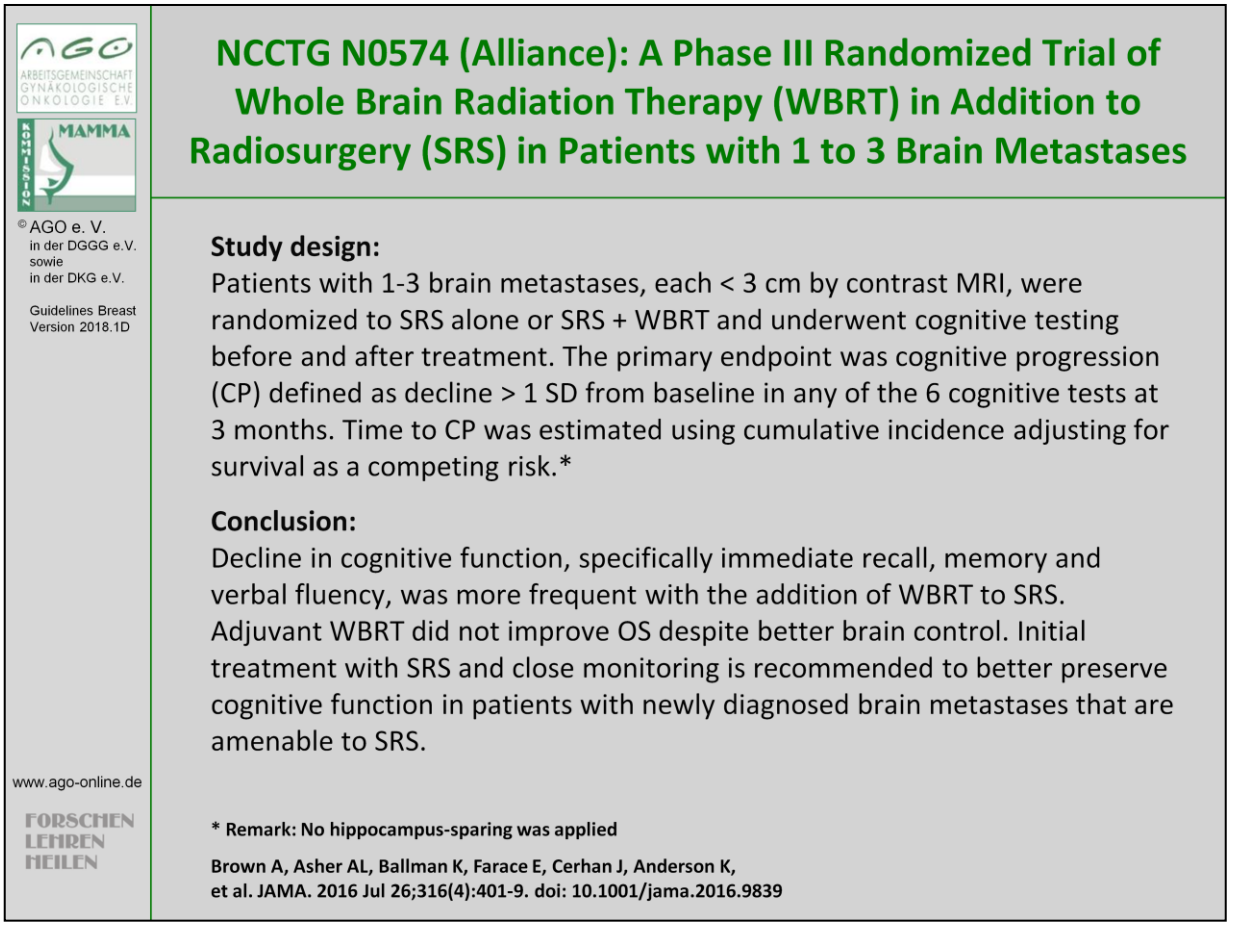

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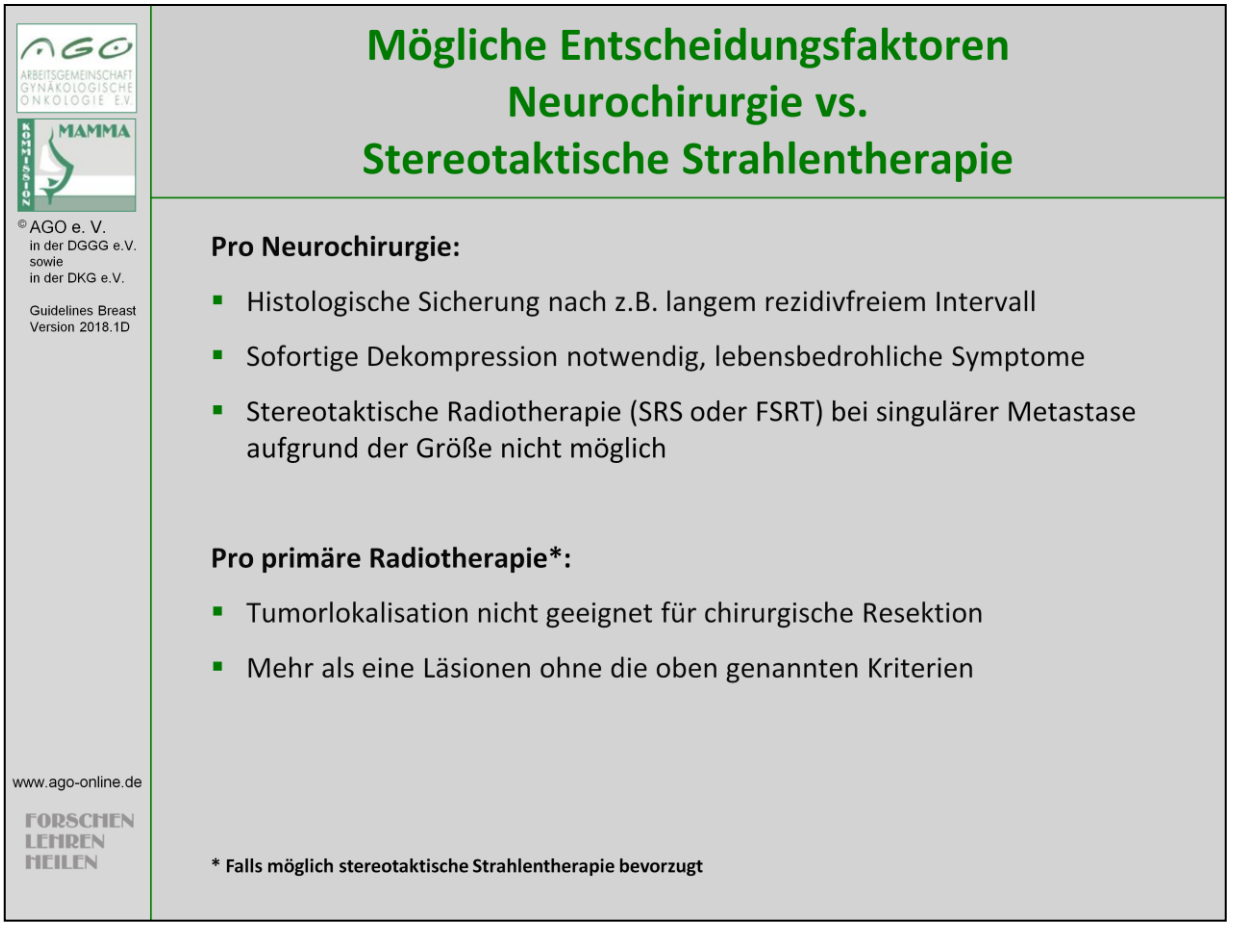
Adjuvant Whole-brain Radiotherapy Versus Observation After Radiosurgery or Surgical Resection of One to Three Cerebral Metastases: Results of the EORTC 22952- 26001 Study

2-year relapse rate after whole-brain radiotherapy (WBRT) versus observation after surgical resection or radiosurgery				
	after surgical resection (n=160)		after radiosurgery (n=199)	
	WBRT	observation	WBRT	observation
Local recurrence	27%	59% (p<0.001)	19%	31% (p=0.040)
New lesions	23%	42% (p=0.008)	33%	48% (p=0.023)

- **Only 12% of the patients had brain metastases from breast cancer.**
- **Overall survival was similar in the WBRT and observation arms (median, 10.9 vs. 10.7 months, respectively; P = .89).**
- **Intracranial progression caused death in 44% patients in the OBS arm and in 28% patients in the WBRT arm.**

Kocher M. J Clin Oncol 2011, 29:134-141

1. Kocher M, Soffietti R, Abacioglu U et al.: Adjuvant whole-brain radiotherapy versus observation after radiosurgery or surgical resection of one to three cerebral metastases: results of the EORTC 22952-26001 study. J Clin Oncol. 2011;29:134-41.



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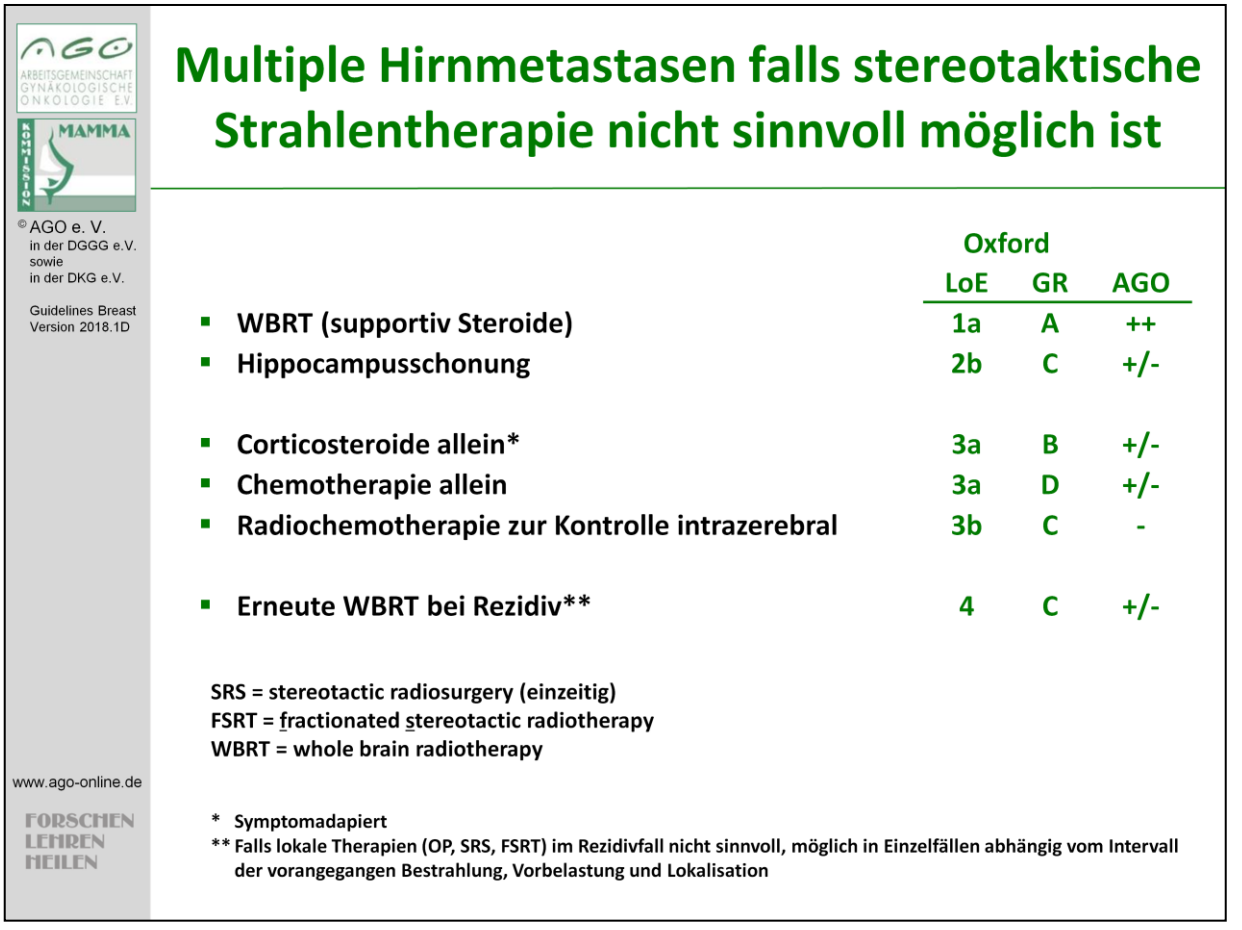

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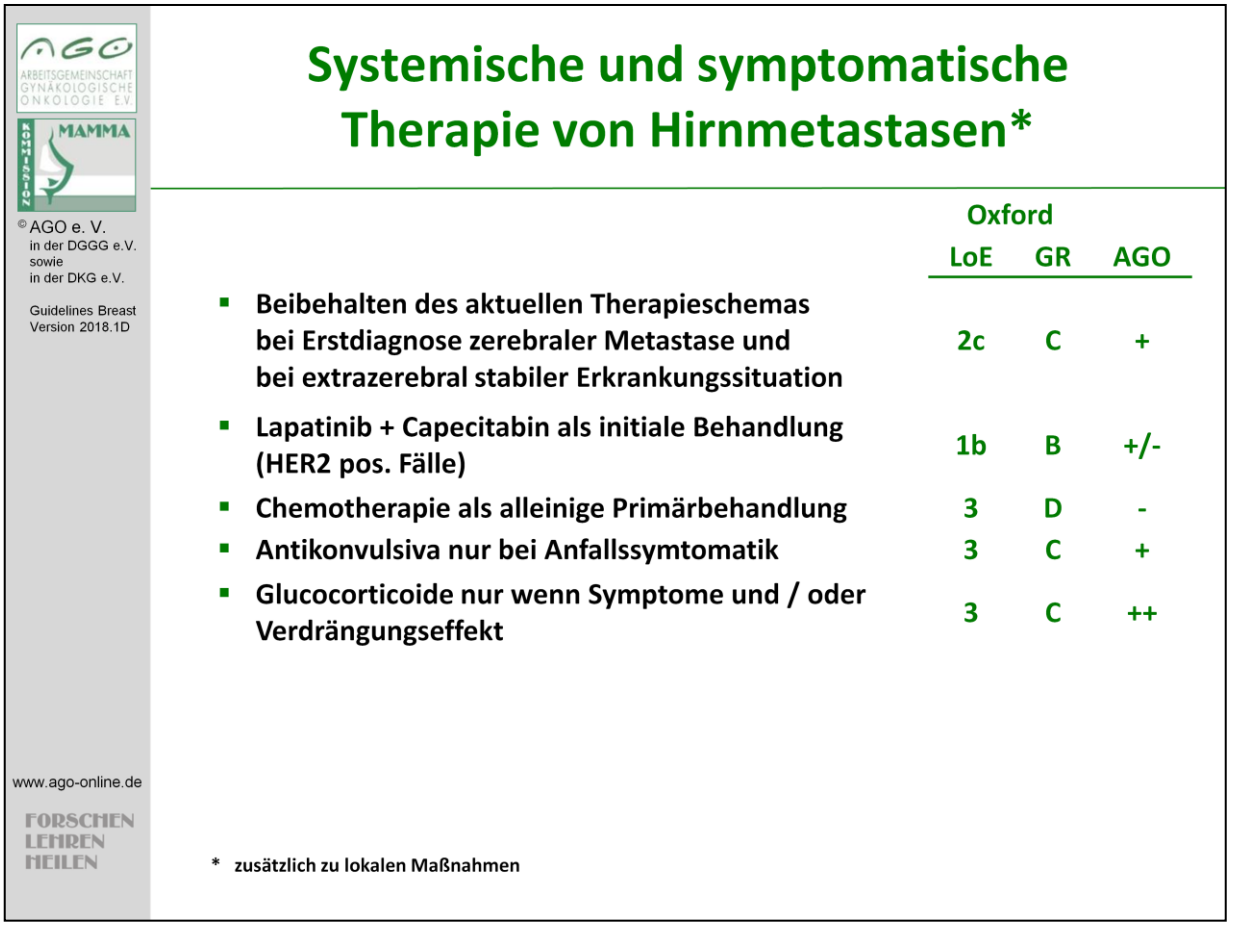

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Leptomeningeosis carcinomatosa Therapie

Guidelines Breast
Version 2018.1D

	Oxford LoE	GR	AGO
Intrathekale oder intraventrikuläre Therapie			
▪ MTX 10-15 mg 2-3x/ Woche (+/- Folsäure-Rescue)	2b	B	+
▪ Liposomales Cytarabin 50 mg, q 2w*	3b	C	+
▪ Thiothepa	3b	C	+/-
▪ Steroide	4	D	+/-
▪ Trastuzumab (HER2-pos. Fälle)	4	C	+/-
Systemtherapie	3b	B	+
Radiotherapie			
▪ Fokal (bei größerem Tumorvolumen)	4	D	+
▪ WBRT	4	D	+
▪ Neuroachse (disseminierte spinale Herde)	4	D	+/-

Aufgrund der schlechten Prognose einer Leptomeningeosis carcinomatosa sollte auch eine rein symptomatische Therapie erwogen werden

* Bis auf Weiteres nicht erhältlich

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