

# Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer



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## Therapy Algorithms

### Preamble:

Therapy options shown in the algorithms are based on the current AGO recommendations, but cannot represent all evidence-based treatment options, since prior therapies, performance status, comorbidities, patient preference, special tumor biology etc. must be taken into account for the actual treatment choice.

In individual cases, other evidence-based treatment options (not listed here) may also be appropriate and justified.

Regardless of approval status, the algorithms only take into account drugs that were available in Germany at the time the algorithm was last updated.

# Therapy Algorithms

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- **Version 2021:**  
Schneeweiss / Bauerfeind / Fehm / Müller / Thomssen / Witzel / Wöckel / Janni
- **Version 2022:**  
Schneeweiss/ Müller with the Breast Committee of the AGO
- **Format legend:**
  -  **Text** Definitions, features, parameters
  -  **Text** Therapy with grade of recommendation AGO+ or AGO++
  -  **Text** Therapy with grade of recommendation AGO+/- (case by case decision)
  -  Recommended path with grade of recommendation AGO+ oder AGO++
  -  Crossing without transition
  -  Path of case by case decision (grade of recommendation AGO+/-)
  -  Arrow points to the next therapy option
  - **AGO++** AGO grade of recommendation of this path

# Content

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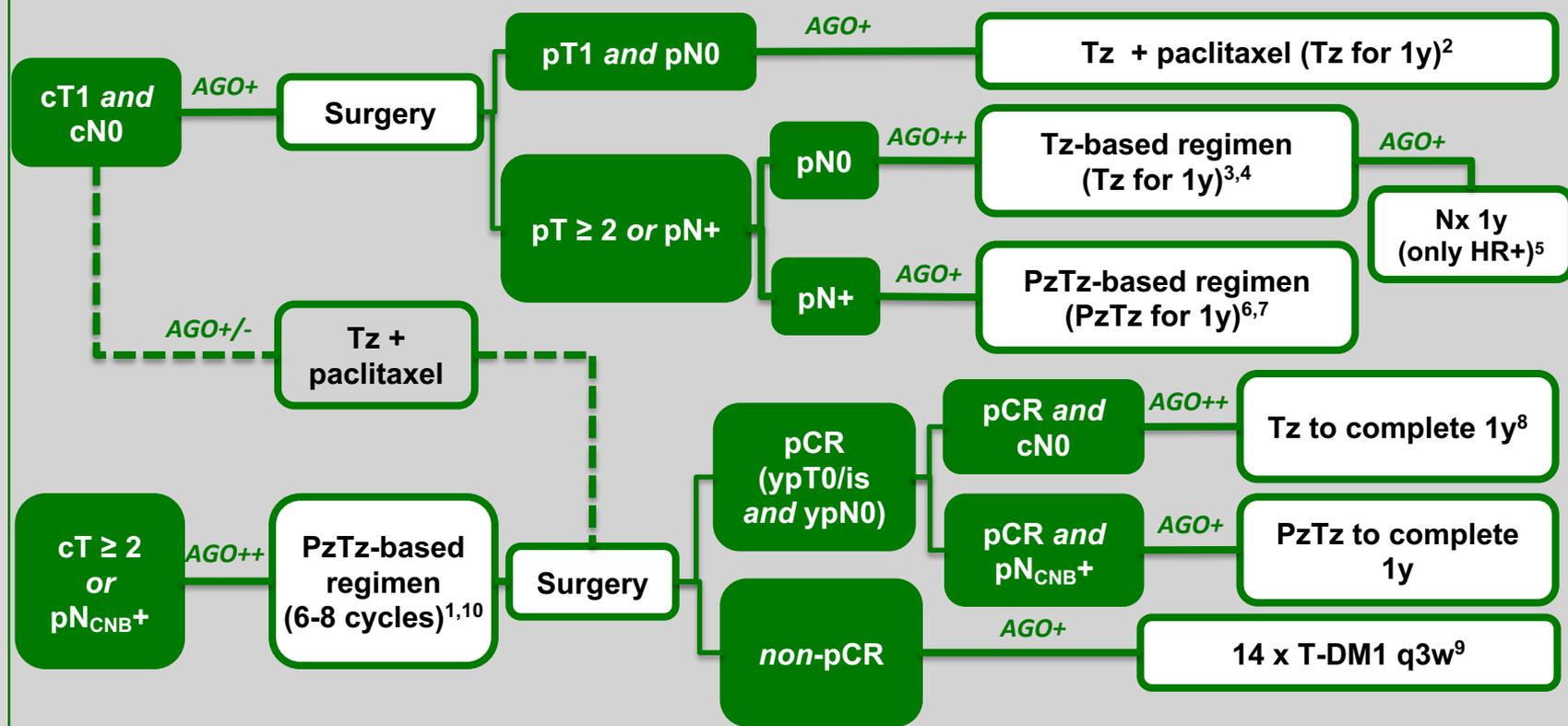
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- **eBC**
  - (Neo)adjuvant therapy of HER2-positive breast cancer
  - (Neo)adjuvant therapy of triple-negative breast cancer
  - Axillary surgery and neoadjuvant chemotherapy (NACT)
  - Adjuvant endocrine therapy in premenopausal patients
  - Adjuvant endocrine therapy in postmenopausal patients
  
- **mBC**
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  - HR-positive / HER2-negative metastatic breast cancer: endocrine-based first line treatment
  - HER2-positive metastatic breast cancer: 1st-3rd-line
  - Triple-negative metastatic breast cancer

# (Neo)adjuvant Therapy of HER2-positive Breast Cancer



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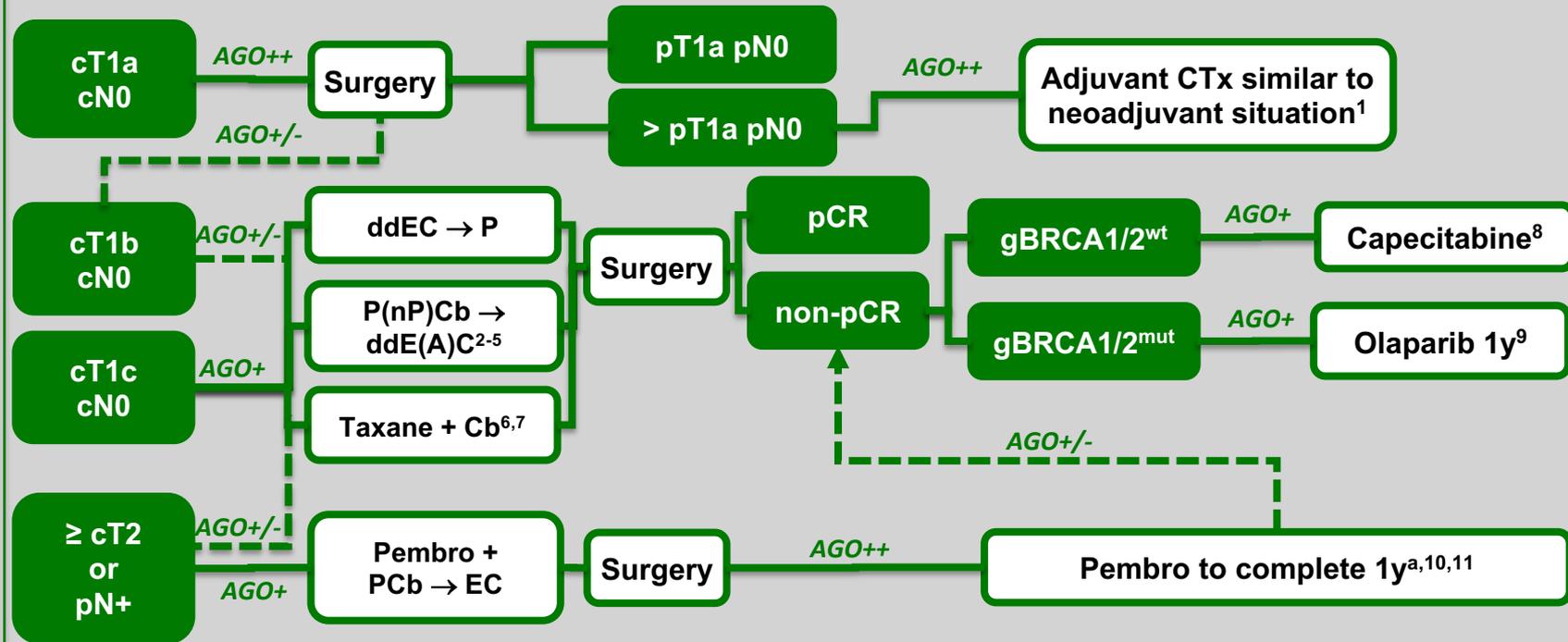


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CNB, core needle biopsy; HR, hormone receptor; Nx, Neratinib; pCR, pathological complete response; Pz, Pertuzumab; q3w, every 3 weeks; T-DM1, Trastuzumab emtansine; Tz, Trastuzumab; y, year; if HR+ adjuvant endocrine therapy

# (Neo)adjuvant Therapy of Triple-negative Breast Cancer

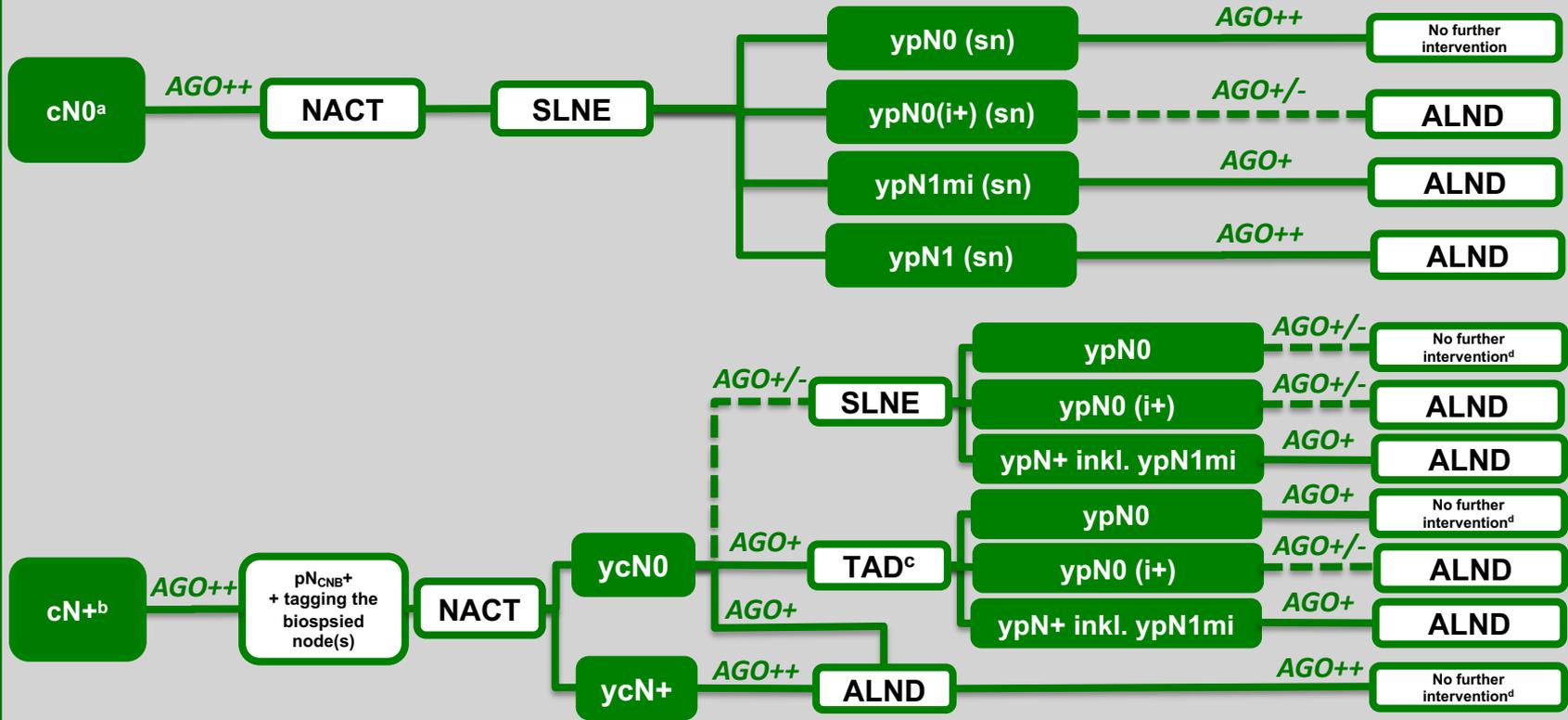
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# Axillary Surgery and Neoadjuvant Chemotherapy (NACT)

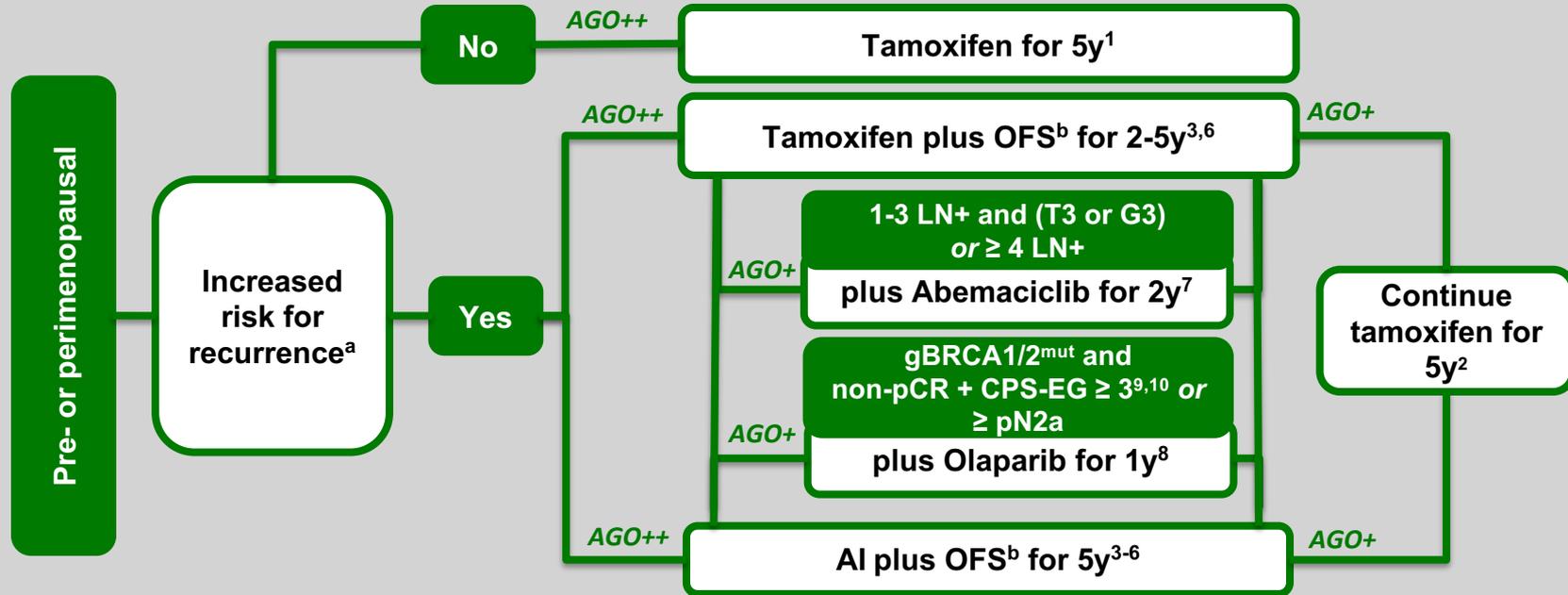
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ALND, axillary lymph node dissection; CNB, core needle biopsy; NACT, neoadjuvant chemotherapy; SN, sentinel node; SLNE, sentinel lymph node excision; TAD, targeted axillary dissection (SLNE + TLNE); TLNE, targeted lymph node excision; <sup>a</sup> participation in EUBREAST-01 study recommended; <sup>b</sup> participation in AXSANA study recommended; <sup>c</sup> TAD in case of 1-3 suspicious lymph nodes before NACT: +, in case of ≥ 4 suspicious lymph nodes before NACT: +/-; <sup>d</sup> for radiotherapy procedures see recommendations for radiotherapy

# Adjuvant Endocrine-based Therapy in Premenopausal Patients



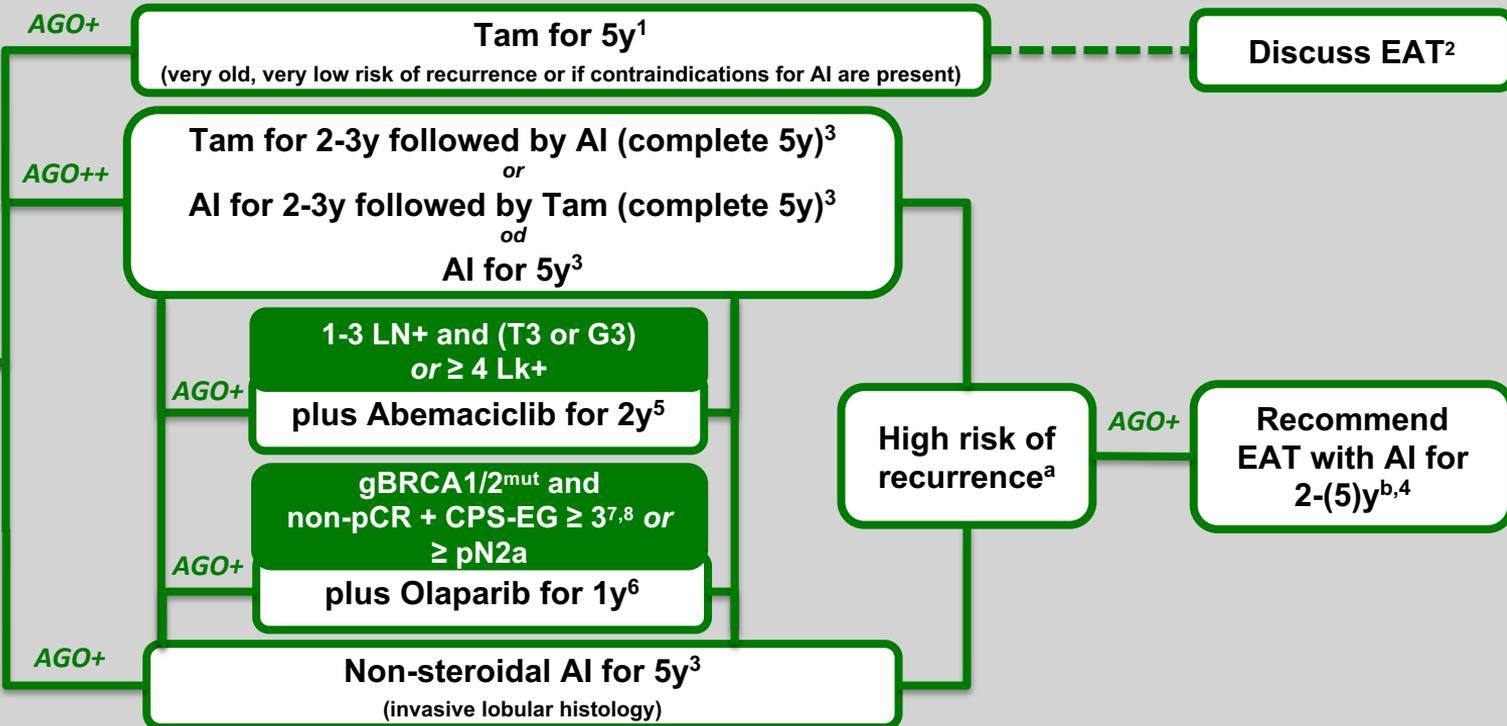
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AI, aromatase inhibitor; CPS-EG, clinical pathological stage + estrogen receptor status and grade score; gBRCA1/2<sup>mut</sup>, germ line BRCA1/2 mutation; LN, lymph node; OFS, ovarian function suppression; pCR, pathologic complete response; y, years;  
<sup>a</sup> Administration of chemotherapy was a surrogate marker for higher risk of recurrence in clinical trials; <sup>b</sup> OFS also in case of remaining or recurring ovarian function within 24 months after chemotherapy induced amenorrhea

# Adjuvant Endocrine-based Therapy in Postmenopausal Patients

Postmenopausal before the start of adjuvant therapy



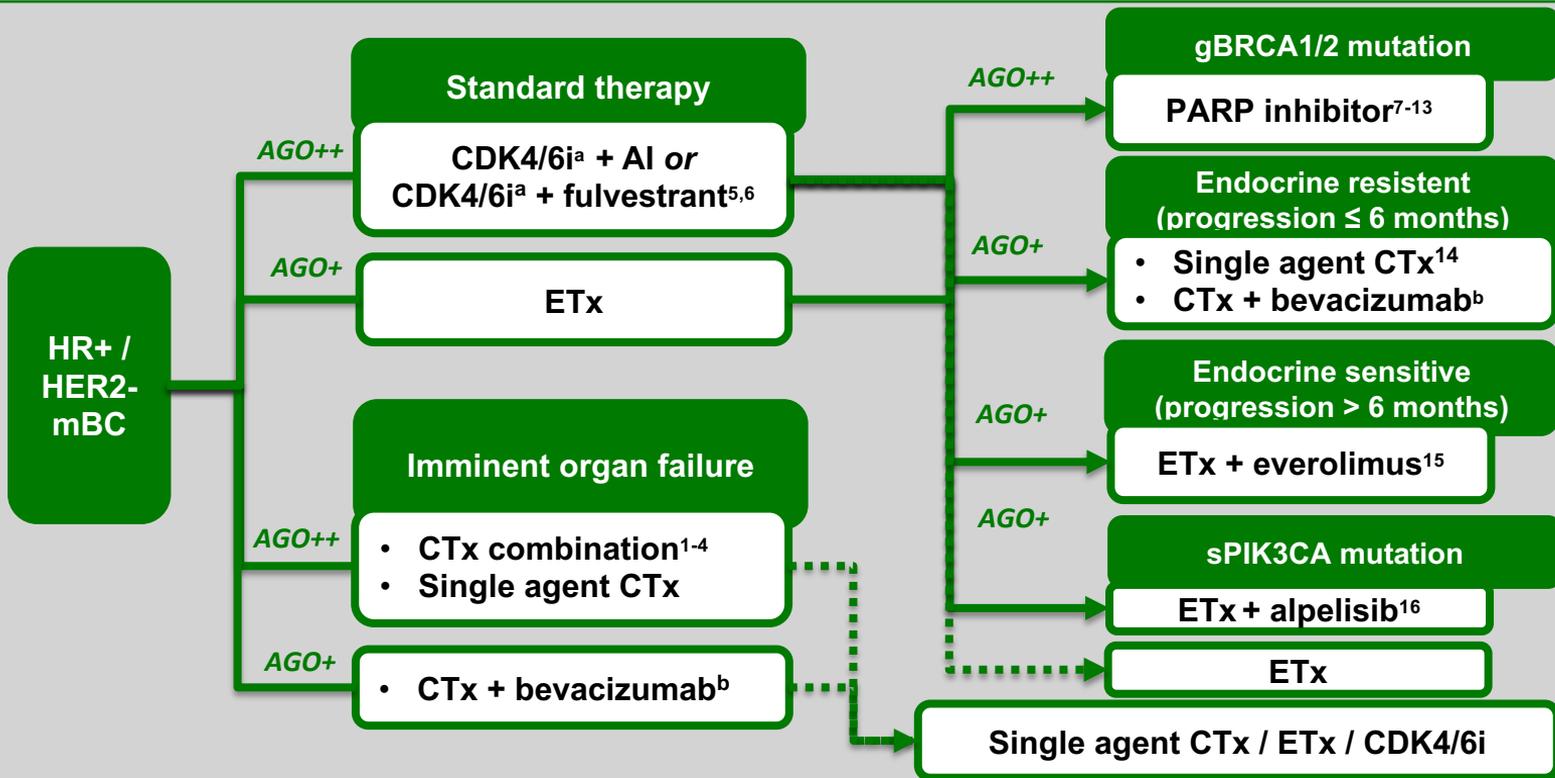
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AI, aromatase inhibitor; CPS-EG, clinical pathological stage + estrogen receptor status and grade score; EAT, extended adjuvant therapy; *g*BRCA1/2<sup>mut</sup>, germ line BRCA1/2 mutation; LN, lymph node; Tam, tamoxifen; y, years; <sup>a</sup> decision criteria may include: condition after neo(adjuvant) chemotherapy (indicating high risk), positive lymph node status, T2/T3 tumors, elevated risk of recurrence based on immuno-histochemical criteria or based on multi-gene expression assays, high CTS5-Score; <sup>b</sup> up to date no impact on overall survival

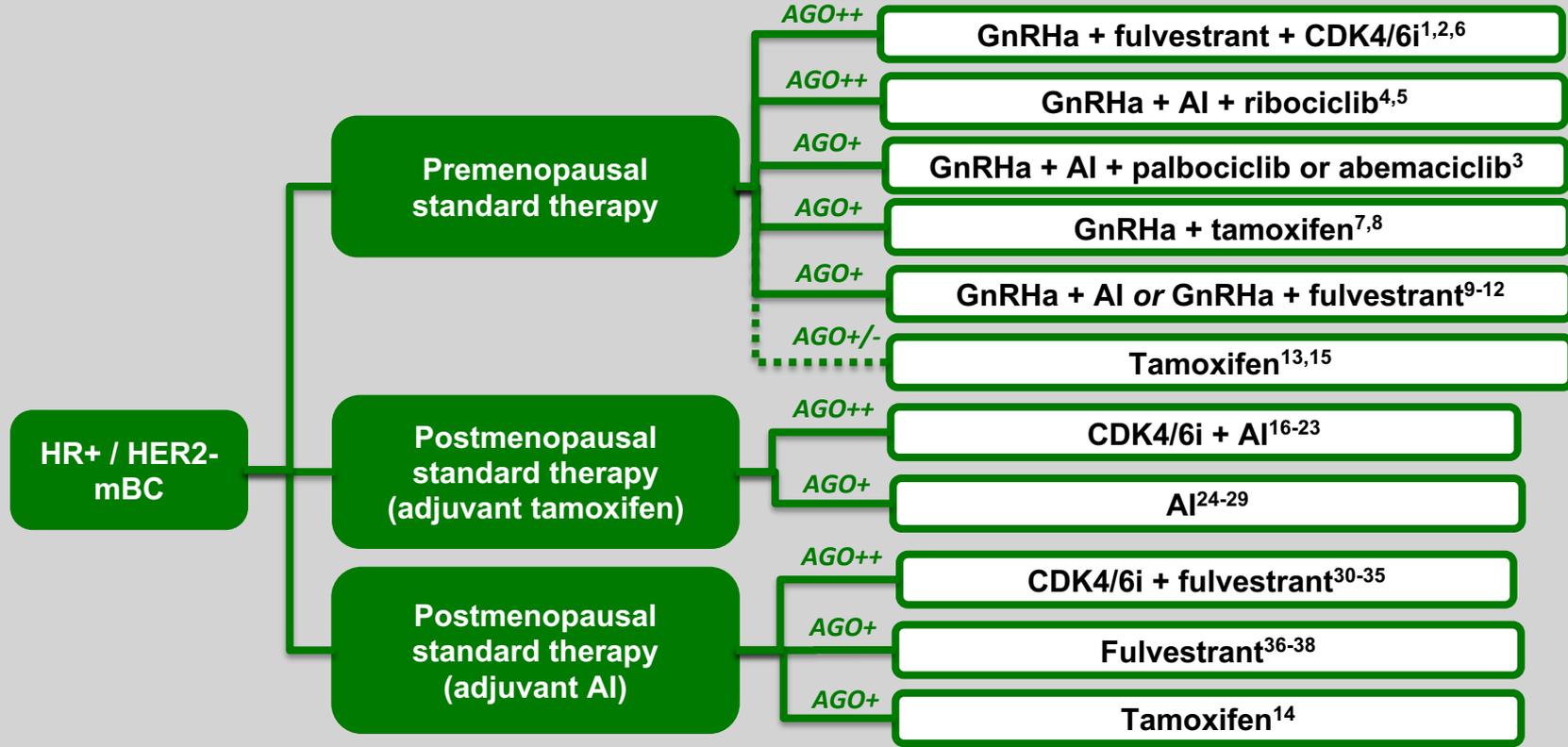
# HR-positive/HER2-negative Metastatic Breast Cancer: Strategies



# HR-positive / HER2-negative Metastatic Breast Cancer: Endocrine-based First Line Treatment

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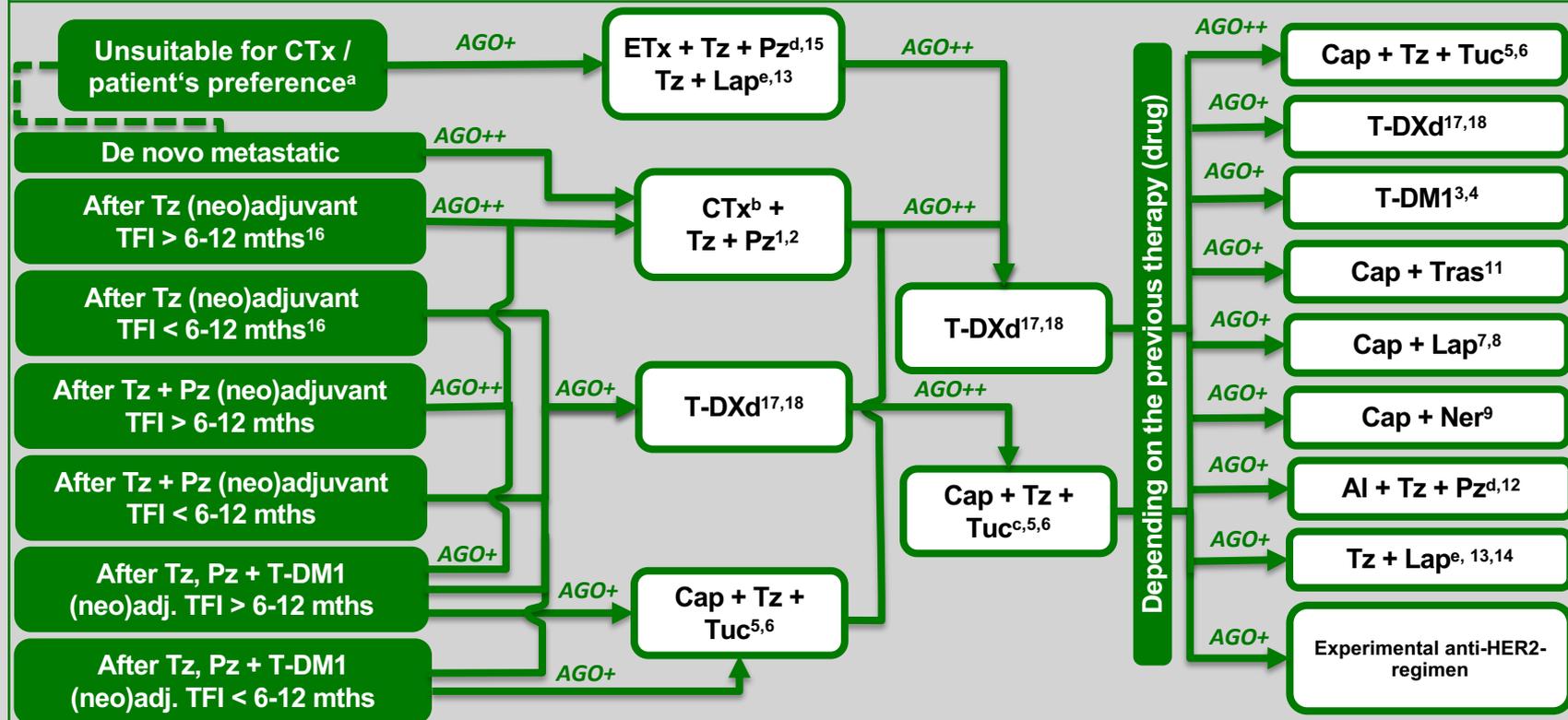
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AI, aromatase inhibitor; CDK4/6i, CDK4/6 inhibitor; GnRHa, GnRH agonist; HR, hormone receptor; mBC, metastatic breast cancer

# HER2-positive Metastatic Breast Cancer: 1<sup>st</sup>-3<sup>rd</sup>-line

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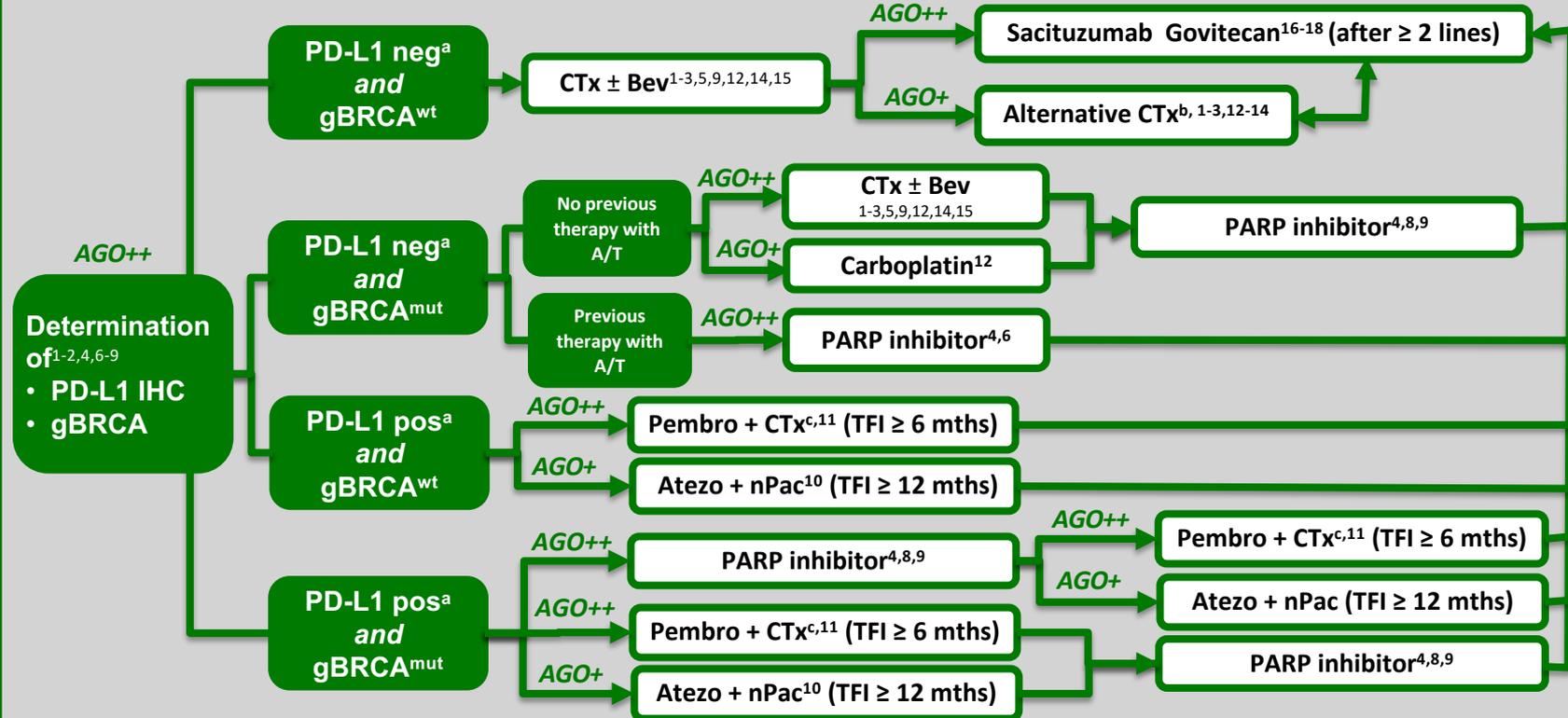


AI, aromatase inhibitor; Cap, capecitabine; CTx, chemotherapy; ETx, endocrine therapy; HR, hormone receptor; Lap, lapatinib; mths, months; Ner, neratinib; Pz, pertuzumab; T-DM1, trastuzumab emtansine; T-DXd, trastuzumab deruxtecan; TFI, treatment-free interval; Tuc, tucatinib; Tz, trastuzumab; <sup>a</sup> no overall survival benefit, consider induction chemotherapy; <sup>b</sup> docetaxel (++) , paclitaxel (++) or nab-paclitaxel (+); <sup>c</sup> only after T-DM1; <sup>d</sup> only if HR pos; <sup>e</sup> only if HR neg

# Triple-negative Metastatic Breast Cancer

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A, anthracycline; Atezo, atezolizumab; Bev, bevacizumab; CTx, chemotherapy; gBRCA, germ line BRCA status; IHC, immunohistochemistry; mths, months; mut, mutated; neg, negative; ; nPac, nab-paclitaxel; Pembro, pembrolizumab; PD-L1, programmed cell death ligand 1; pos, positive; T, taxane; TFI, treatment-free interval; wt, wild type; <sup>a</sup> Pembro: CPS < 10 (neg) oder CPS ≥ 10 (pos), Atezo: IC < 1% (neg), IC ≥ 1% (pos); <sup>b</sup> use of not previously used compounds or regimen; <sup>c</sup> nPac, Pac or Carboplatin+Gemcitabin