Breast Cancer

CHI Formulary Treatment algorithm
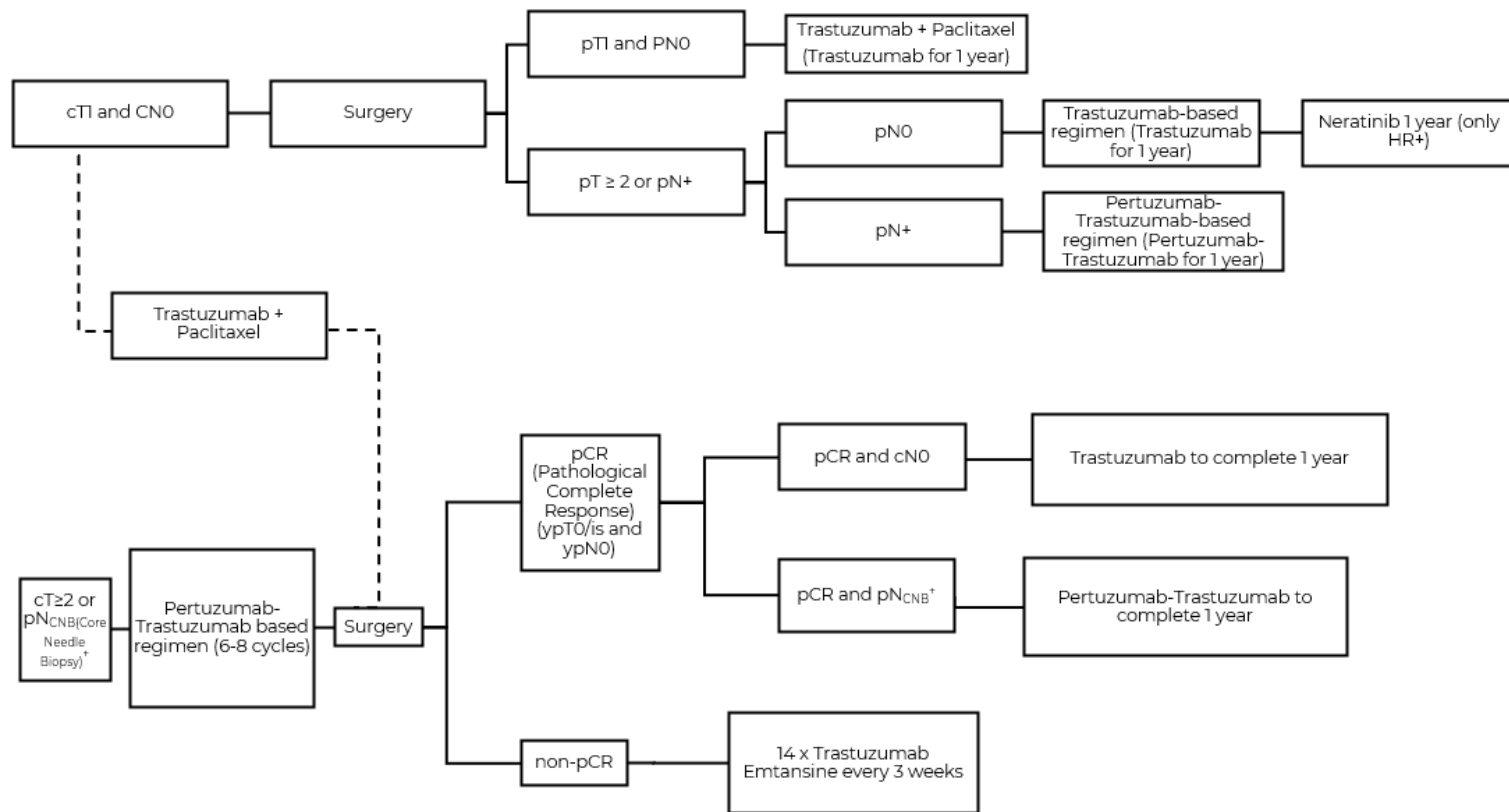
Figures 1 to 8 outline a comprehensive treatment algorithm on **the Breast Cancer** aimed at addressing the different lines of treatment after thorough review of medical and economic evidence by CHI committees.

For further evidence, please refer to CHI **Breast Cancer** full report. You can stay updated on the upcoming changes to our formulary by visiting our website at https://chi.gov.sa/AboutCCHI/CCHIprograms/Pages/IDF.aspx
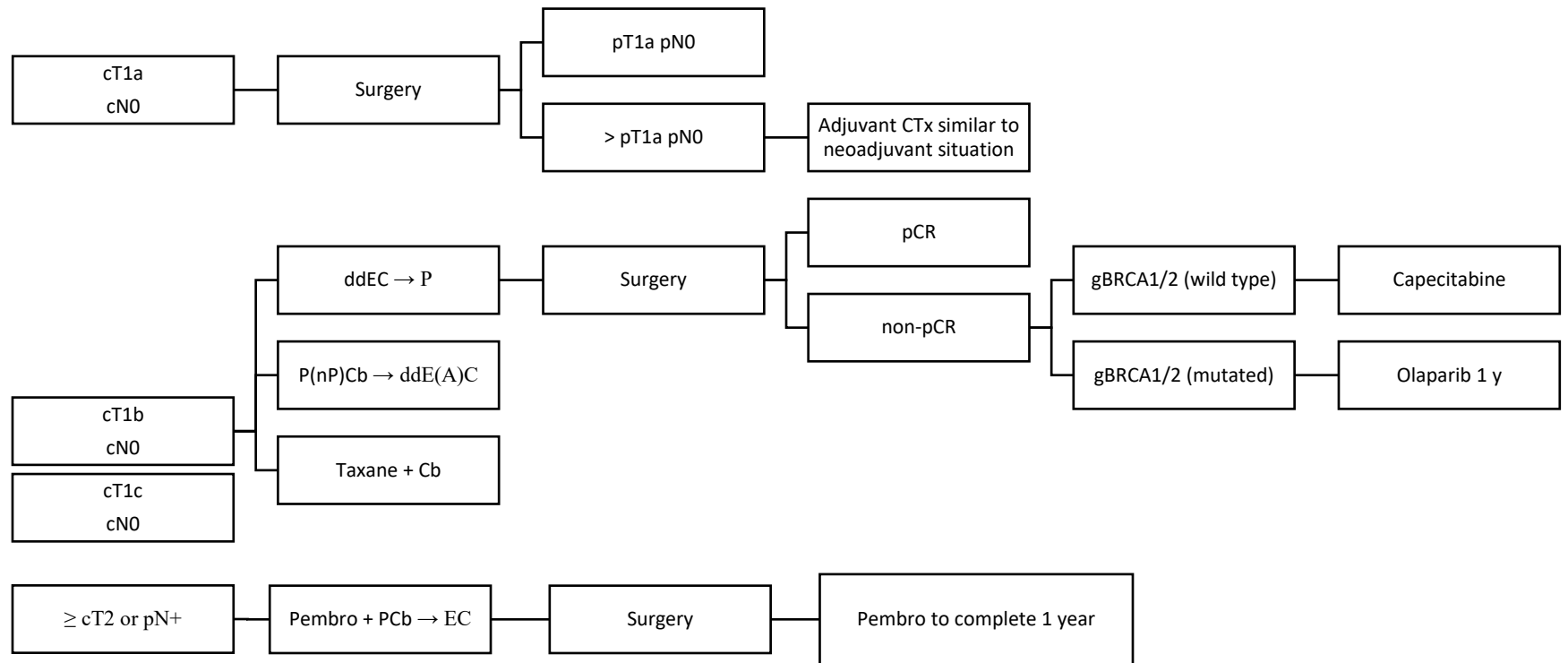
Our treatment algorithm offers a robust framework for enhancing patient care and optimizing treatment outcomes across a range of treatment options, holding great promise for improving healthcare delivery.

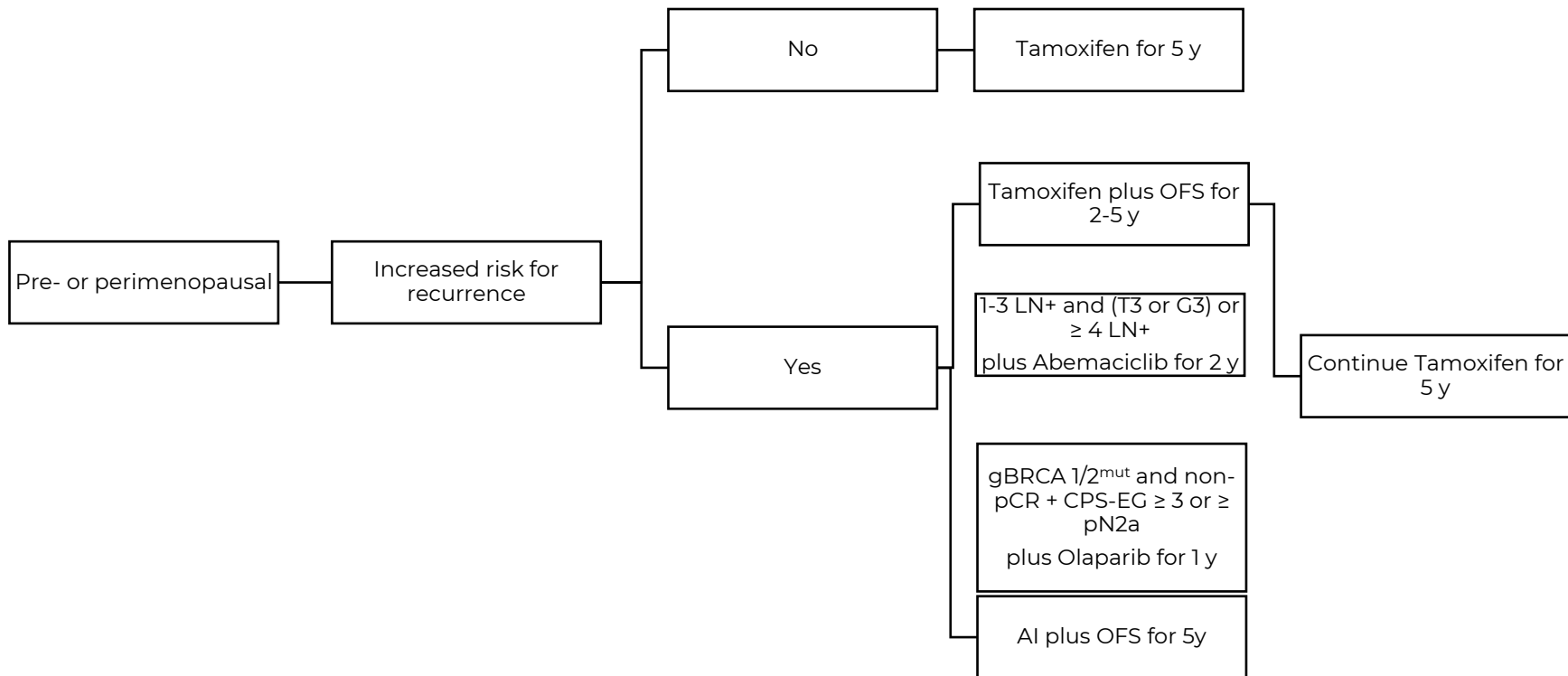_Figure 1: (Neo)adjuvant therapy of HER2-positive Breast Cancer_

• [1] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de

```
┌──────────────┐         ┌──────────────┐         ┌──────────────────┐
│  cT1a        │─────────│   Surgery    │────┬────│   pT1a pN0        │
│  cN0         │         │              │    │     └──────────────────┘
└──────────────┘         └──────────────┘    │     ┌──────────────────┐   ┌───────────────────────┐
                                             └────│  > pT1a pN0       │───│ Adjuvant CTx similar to│
                                                   └──────────────────┘   │ neoadjuvant situation  │
                                                                          └───────────────────────┘
```

```
                         ┌──────────────┐         ┌──────────────┐   ┌──────────┐
                    ┌────│  ddEC → P    │─────────│   Surgery    │─┬─│   pCR    │
                    │    └──────────────┘         └──────────────┘ │ └──────────┘
                    │                                              │ ┌──────────┐   ┌────────────────────┐   ┌──────────────┐
                    │                                              └─│ non-pCR  │─┬─│ gBRCA1/2 (wild type)│───│ Capecitabine │
                    │    ┌──────────────────┐                        └──────────┘ │ └────────────────────┘   └──────────────┘
                    ├────│ P(nP)Cb → ddE(A)C│                                     │ ┌────────────────────┐   ┌──────────────┐
┌──────────────┐    │    └──────────────────┘                                     └─│ gBRCA1/2 (mutated)  │───│  Olaparib 1 y│
│  cT1b        │────┤                                                                └────────────────────┘   └──────────────┘
│  cN0         │    │    ┌──────────────┐
└──────────────┘    └────│  Taxane + Cb │
┌──────────────┐         └──────────────┘
│  cT1c        │
│  cN0         │
└──────────────┘
```

```
┌──────────────┐    ┌──────────────────┐    ┌──────────────┐    ┌──────────────────────────┐
│ ≥ cT2 or pN+ │────│ Pembro + PCb → EC │────│   Surgery    │────│ Pembro to complete 1 year │
└──────────────┘    └──────────────────┘    └──────────────┘    └──────────────────────────┘
```

2

Figure 2: (Neo)adjuvant therapy of triple negative Breast Cancer

---

- [2] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de

Figure 3: Adjuvant endocrine-based therapy in premenopausal patients

- [3] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de
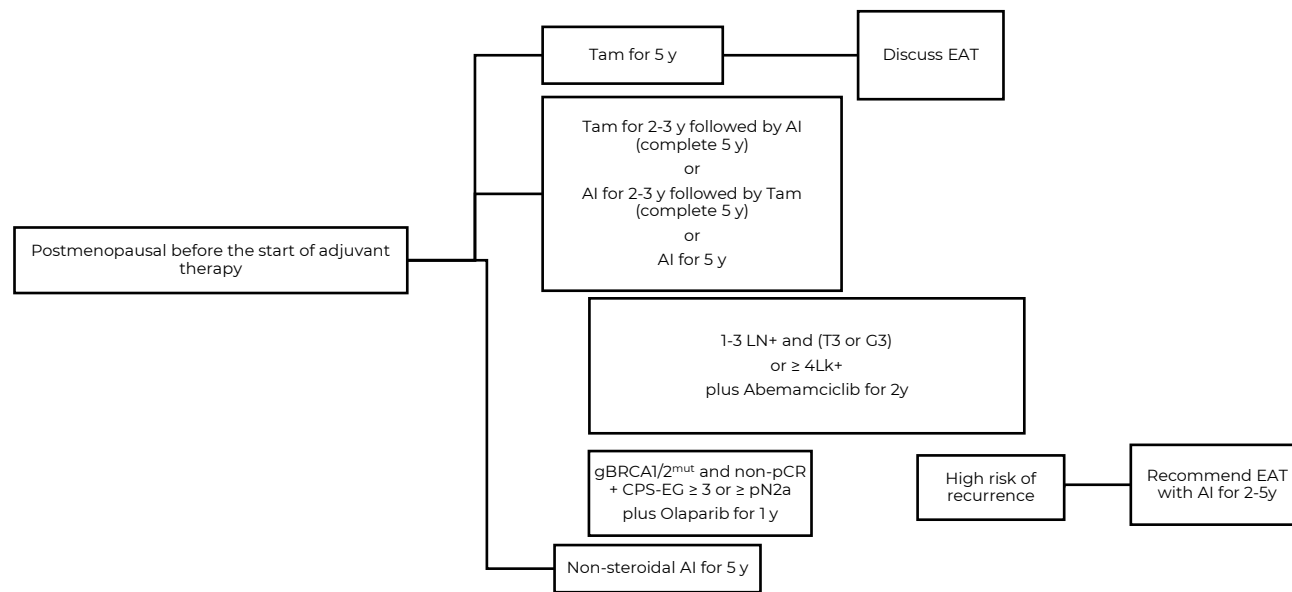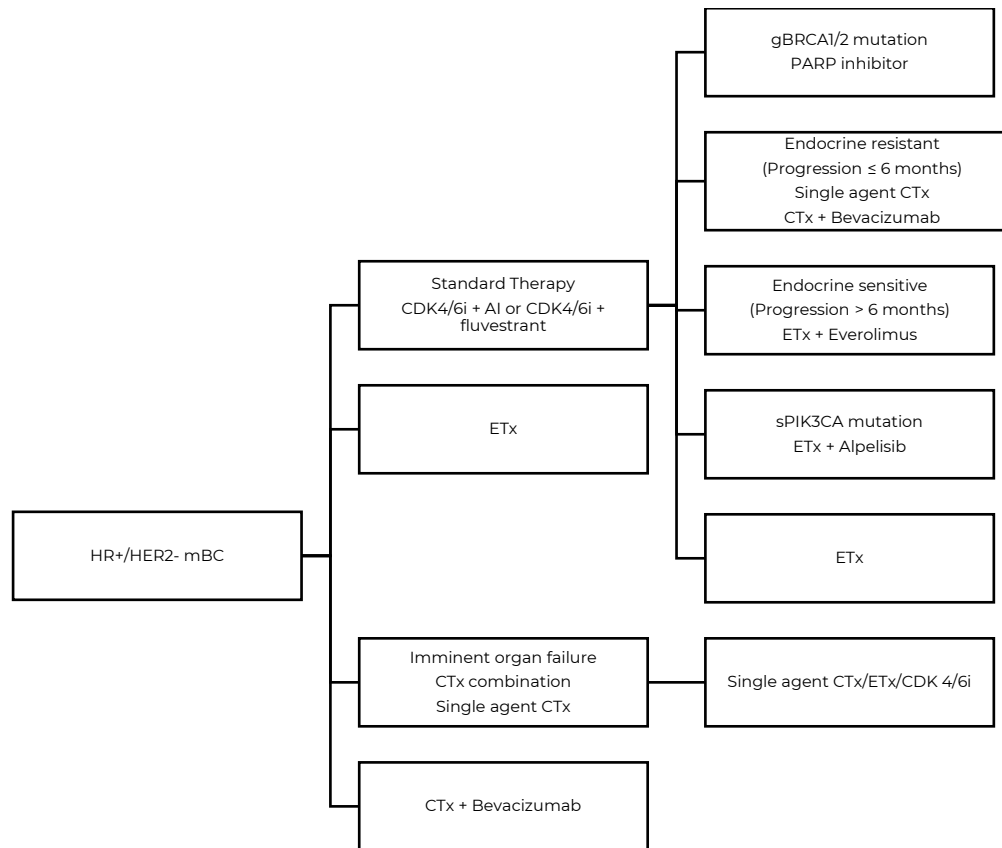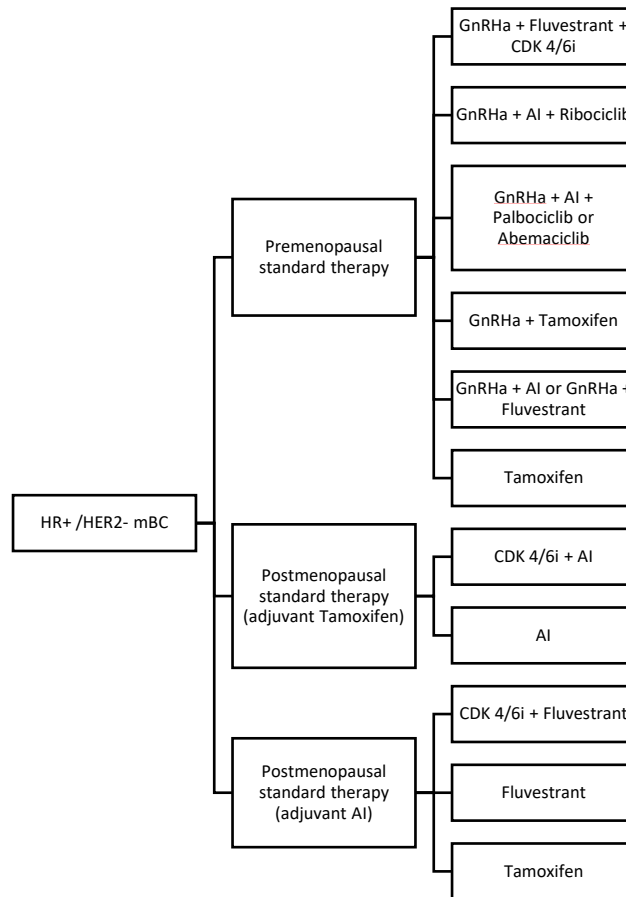
```
                                        ┌─────────────────┐          ┌─────────────────┐
                                        │   Tam for 5 y   │──────────│   Discuss EAT   │
                                        └─────────────────┘          └─────────────────┘

                                        ┌──────────────────────────────┐
                                        │  Tam for 2-3 y followed by AI │
                                        │        (complete 5 y)         │
                                        │             or                │
                                        │  AI for 2-3 y followed by Tam │
                                        │        (complete 5 y)         │
                                        │             or                │
                                        │          AI for 5 y           │
                                        └──────────────────────────────┘

 ┌─────────────────────────────┐        ┌──────────────────────────────┐
 │ Postmenopausal before the   │        │     1-3 LN+ and (T3 or G3)    │
 │ start of adjuvant therapy   │        │          or ≥ 4Lk+           │
 └─────────────────────────────┘        │      plus Abemamciclib for 2y │
                                        └──────────────────────────────┘

                                        ┌──────────────────────────────┐   ┌──────────────┐   ┌────────────────┐
                                        │ gBRCA1/2$^{mut}$ and non-pCR  │   │ High risk of │   │ Recommend EAT  │
                                        │ + CPS-EG ≥ 3 or ≥ pN2a        │   │ recurrence   │   │ with AI for 2-5y│
                                        │ plus Olaparib for 1 y         │   └──────────────┘   └────────────────┘
                                        └──────────────────────────────┘

                                        ┌──────────────────────────────┐
                                        │    Non-steroidal AI for 5 y   │
                                        └──────────────────────────────┘
```

Figure 4: Adjuvant Endocrine-based therapy in postmenopausal patients

4

- [4] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de

```
                                              ┌─────────────────────────┐
                                              │   gBRCA1/2 mutation      │
                                              │   PARP inhibitor         │
                                              └─────────────────────────┘

                                              ┌─────────────────────────┐
                                              │  Endocrine resistant     │
                                              │ (Progression ≤ 6 months) │
                                              │  Single agent CTx        │
                                              │  CTx + Bevacizumab       │
                                              └─────────────────────────┘
                    ┌──────────────────────┐  ┌─────────────────────────┐
                    │  Standard Therapy    │  │  Endocrine sensitive     │
                    │  CDK4/6i + AI or     │  │ (Progression > 6 months) │
                    │  CDK4/6i + fluvestrant│ │  ETx + Everolimus        │
                    └──────────────────────┘  └─────────────────────────┘

                    ┌──────────────────────┐  ┌─────────────────────────┐
                    │        ETx           │  │   sPIK3CA mutation       │
                    └──────────────────────┘  │   ETx + Alpelisib        │
                                              └─────────────────────────┘

  ┌──────────────────┐                        ┌─────────────────────────┐
  │  HR+/HER2- mBC   │                        │          ETx            │
  └──────────────────┘                        └─────────────────────────┘

                    ┌──────────────────────┐  ┌─────────────────────────┐
                    │ Imminent organ failure│ │ Single agent CTx/ETx/    │
                    │  CTx combination     │  │ CDK 4/6i                 │
                    │  Single agent CTx    │  └─────────────────────────┘
                    └──────────────────────┘

                    ┌──────────────────────┐
                    │  CTx + Bevacizumab   │
                    └──────────────────────┘
```

[5]

Figure 5: HR-positive/HER2-negative Metastatic Breast Cancer Strategies

- [5] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de

Figure 6: HR-positive/HER2-negative metastatic breast cancer: endocrine-based first line treatment

• [6] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de
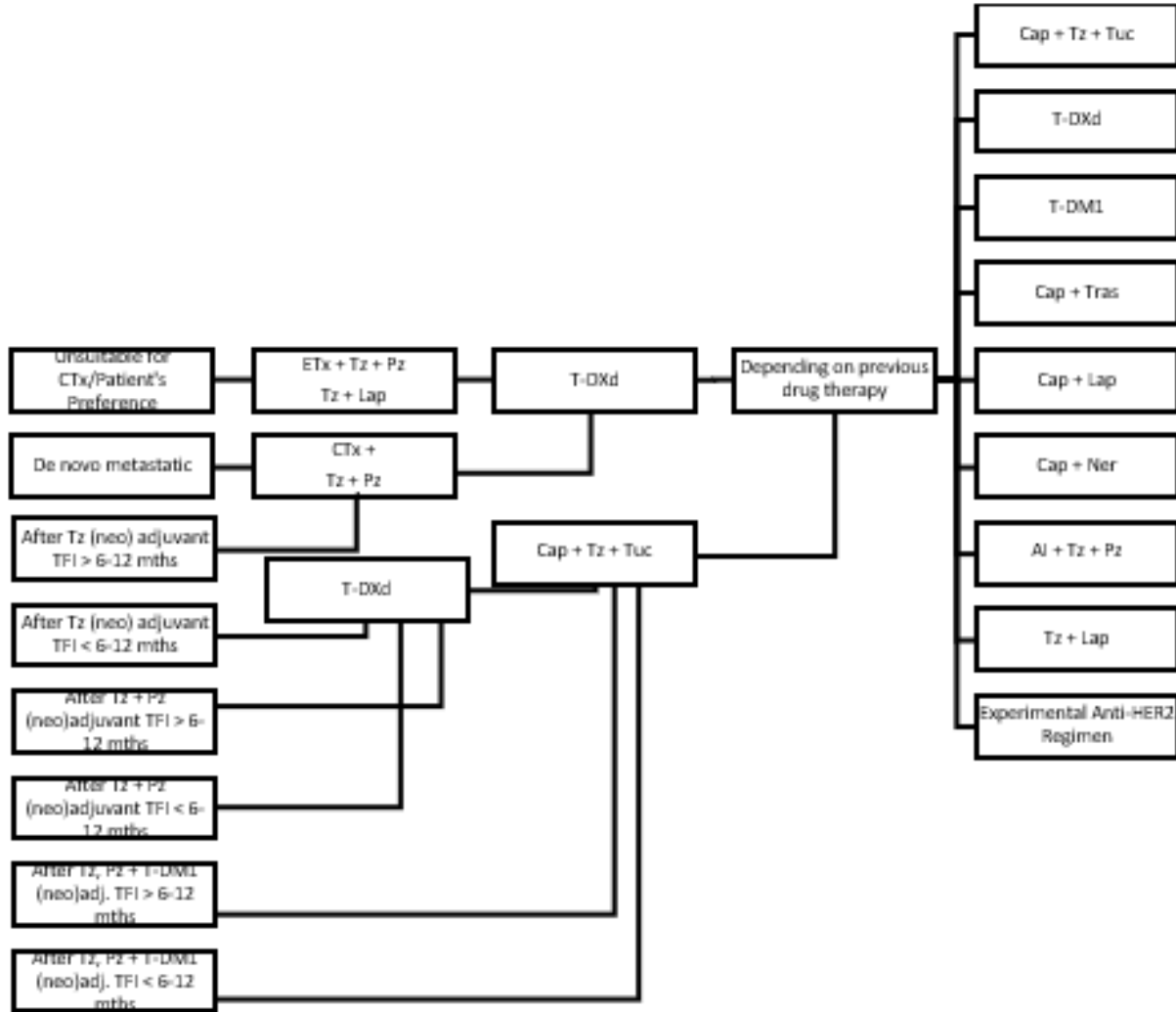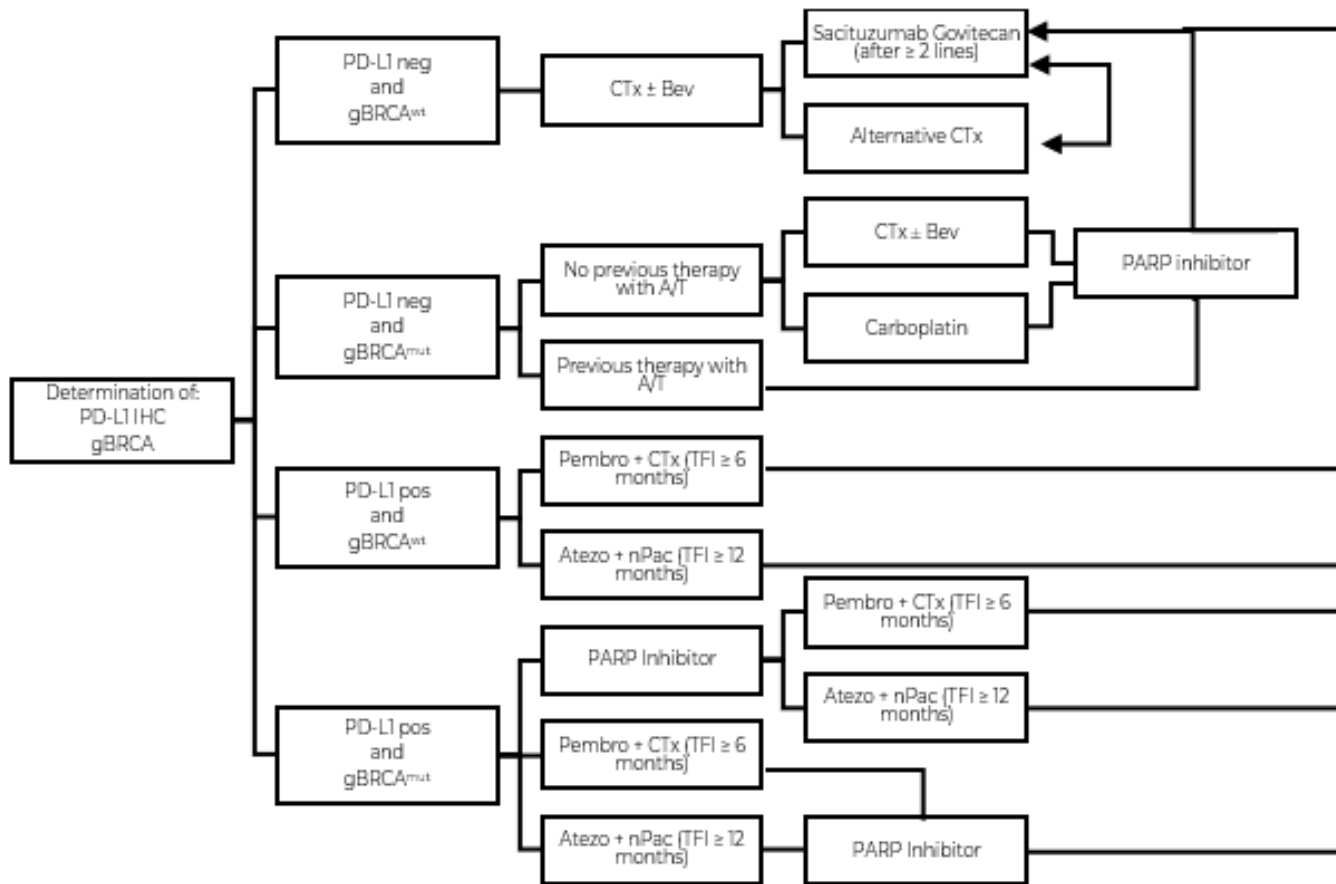
Figure 7: HER2-positive metastatic breast cancer: 1rst-3rd line:[7]

- [7] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de

Figure 8: Triple-negative metastatic breast cancer

• [8] Diagnosis and Treatment of Patients with Early and Advanced Breast Cancer Therapy Algorithms. www.ago-online.de