

## Background

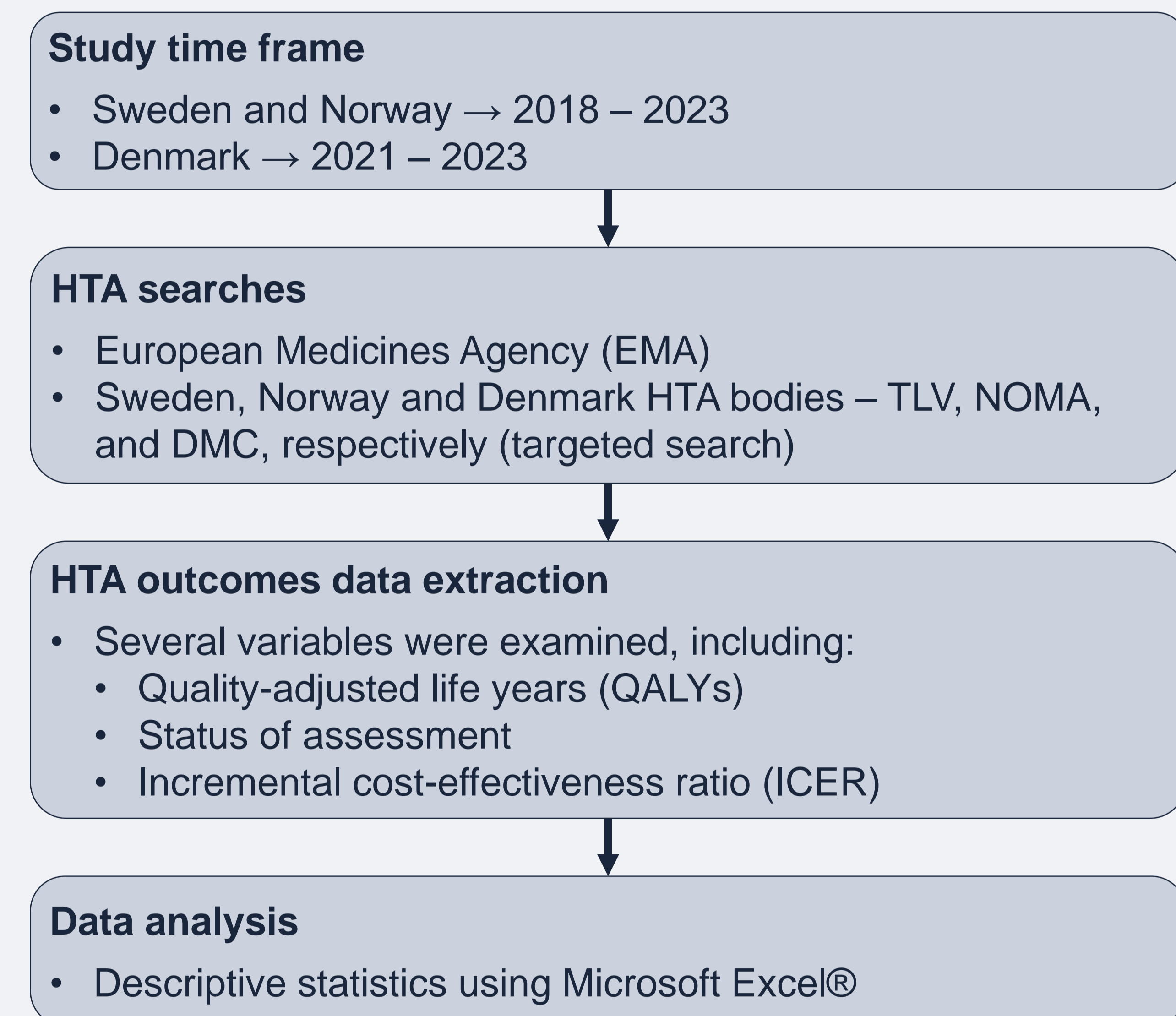
Breast cancer remains the most prevalent cancer among women in the Nordic countries<sup>1-3</sup>, with metastatic disease posing significant treatment and patient care challenges. Treatment selection for breast cancer patients is influenced by the molecular subtype<sup>4,5</sup>. There is an increasing number of medicines for breast cancer patients, and Health Technology Assessments (HTAs) are needed to evaluate the medicines for clinical and economic effectiveness.

### Aim of the study

Differences in evaluation of HTAs for these treatments exist between the Nordic countries. This has direct impact on policy decisions and healthcare practices. Thus, the aim of this study was to enhance the understanding of HTA decisions for metastatic breast cancer treatments in Sweden, Norway, and Denmark and to explore the potential for harmonising HTA practices across these Nordic countries.

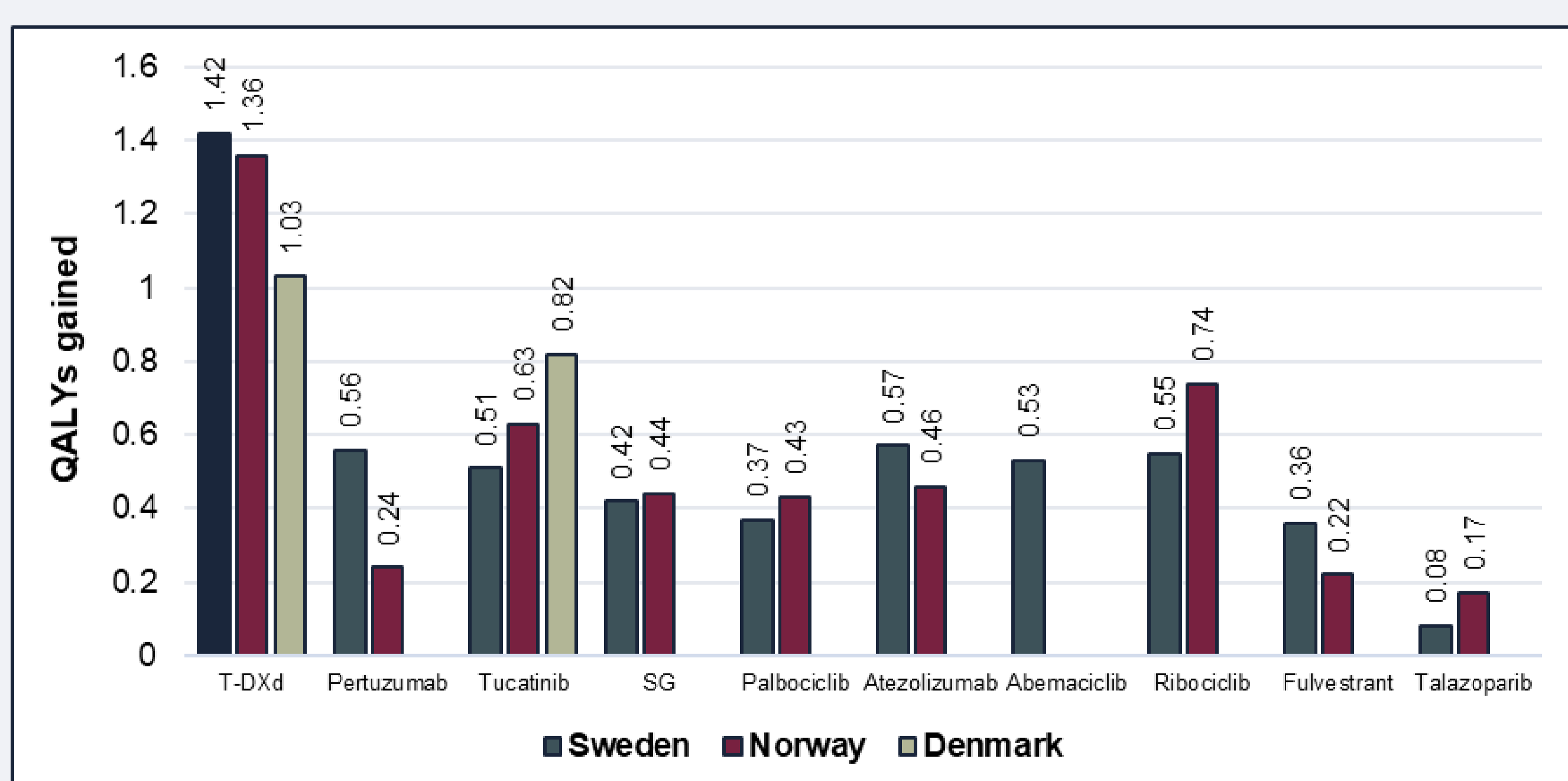
## Methods

**Figure 1. Methodology used for the comparative analysis of HTA outcomes in the Nordics.**



## Results

**Figure 2. Quality-adjusted life years gained per medicine and country.**



From the analysed treatments, the three countries assessed T-DXd as the treatment with highest number of QALYs gained (**Figure 2**).

Variations were observed in the recommendation statuses within the three countries. Sweden and Norway recommended a higher number of medicines compared to Denmark.

**Table 1. Status of breast cancer treatments per country and molecular subtype.** All the treatments analysed are recommended in Norway. In Sweden, all except atezolizumab are recommended. Denmark recommends three treatments out of the six that were included in the analysis.

Subtype	Treatment	Sweden	Norway	Denmark
HER2+	T-DXd	Recommended	Recommended	Recommended
HER2+	Pertuzumab	Recommended	Recommended	Not assessed
HER2+	Tucatinib	Recommended	Recommended	Recommended
HER2-	Talazoparib	Recommended	Recommended	Not recommended
TNBC	SG	Recommended	Recommended	Not recommended
TNBC	Atezolizumab	Not recommended	Recommended	Recommended
HR+, HER2-	Abemaciclib	Recommended	Recommended	Not applicable
HR+, HER2-	Ribociclib	Recommended	Recommended	Not applicable
HR+, HER2-	Alpelisib	Recommended	Recommended	Not recommended
HR+, HER2-	Palbociclib	Recommended	Recommended	Not assessed
HR+	Fulvestrant	Recommended	Recommended	Not assessed

The ICERs of the analysed medicines were also extracted. Some of them varied between countries. The highest differences were seen in pertuzumab and atezolizumab between Sweden and Norway, for which the ICERs were almost the double in Sweden compared to Norway.

**Table 2. ICERs overview of breast cancer treatments per country and molecular subtype.** The majority of the health economic analyses corresponded to cost-effectiveness analyses to the exception of one case in Sweden and two cases in Norway.

Subtype	Treatment	ICER Sweden (EUR)	ICER Norway (EUR)	ICER Denmark (EUR)
HER2+	T-DXd	90,431	99,514	81,234/234,494
HER2+	Pertuzumab	223,914	113,208	-
HER2+	Tucatinib	72,629	142,049	123,396
HER2-	Talazoparib	220,456/224,280	170,430	-
TNBC	SG	168,584	151,210	-
TNBC	Atezolizumab	137,553	63,873	-
HR+, HER2-	Abemaciclib	74,664	Cost minimization analysis	-
HR+, HER2-	Ribociclib	75,273	106,359	-
HR+, HER2-	Alpelisib	Cost minimization analysis	Cost minimization analysis	-
HR+, HER2-	Palbociclib	86,049	114,037	-
HR+	Fulvestrant	58,409/69,144	41,098	-

Abbreviations: HER2+, human epidermal growth factor receptor 2 positive; HER2-, human epidermal growth factor receptor 2 negative; HR+, hormone receptor positive; SG, sacituzumab govitecan; T-DXd, trastuzumab deruxtecan; TNBC, triple-negative breast cancer.

## Discussion and conclusion

This comparative analysis highlights the complexity and heterogeneity of HTA practices across the Nordic countries. Identifying and comparing HTA outcomes for metastatic breast cancer treatments provides valuable insights into the potential for harmonising evaluation methodologies. Such harmonisation could improve patient access to essential therapies across the countries and guide clinical decision-making and pharmaceutical R&D efforts.

## References

<sup>1</sup>Socialstyrelsen. Statistics on Cancer Incidence 2021. Official Statistics of Sweden, 2022.  
<sup>2</sup>Cancer Registry of Norway. Cancer in Norway 2022. Published in 2023.  
<sup>3</sup>WHO. Population factsheets [Internet]. 2022. Available from: <https://gco.iarc.fr/today/en/factsheets-populations#countries>

<sup>4</sup>Agostinetti E, et al. Systemic therapy for early-stage breast cancer: learning from the past to build the future. *Nat Rev Clin Oncol.* 2022 Dec;19(12):763–74.  
<sup>5</sup>Huppert LA, et al. Systemic therapy for hormone receptor-positive/human epidermal growth factor receptor 2-negative early stage and metastatic breast cancer. *CA Cancer J Clin.* 2023;73(5):480–515.