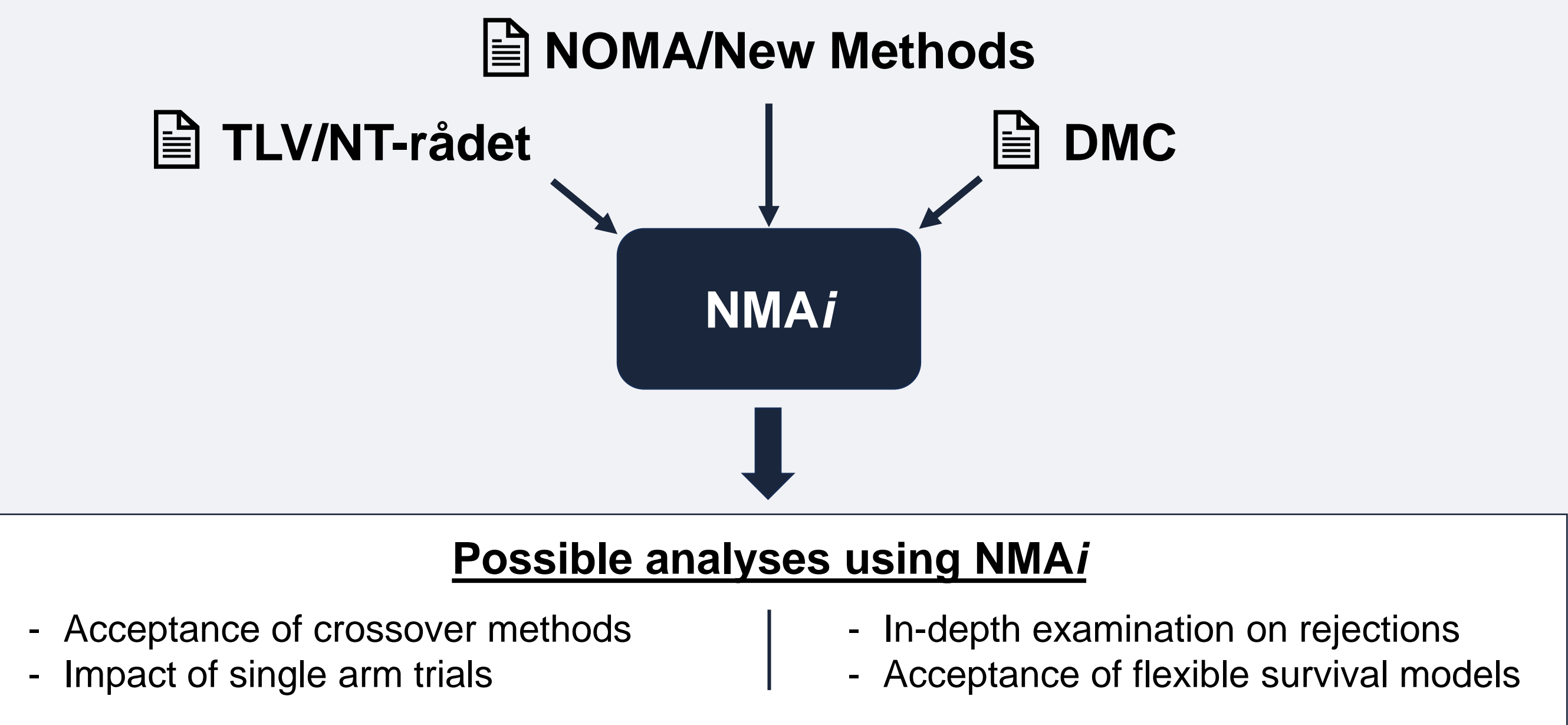


## Background

There is an increasing number of Health Technology Assessments (HTAs) in the Nordic countries. When preparing HTA submissions, the understanding of the current HTA assessment environment is key. In addition, recognising that this is a continuously evolving environment with updated information is essential. HTAs are available at the HTA bodies' websites. Therefore, the data is scattered, and it is time-consuming to find assessments about the same medicine in different countries or among different medicines in the same country. Aiming to aid the search and subsequent analysis of HTAs in Sweden, Norway, and Denmark, we have developed NMA*i*.

**Figure 1. NMA*i* database content and possible analyses to perform**



## Methods

- The NMA*i* tool consists of a database with **more than 10,000 documents** from the year 2000 published by:
  - The Dental and Pharmaceutical Benefits Agency (TLV)<sup>1</sup> and The New Therapies Council (NT-council)<sup>2</sup> in Sweden
  - The Norwegian Medical Products Agency (NOMA)<sup>3</sup> and New Methods<sup>4</sup> in Norway
  - The Danish Medicines Council (DMC)<sup>5</sup> in Denmark.
- NMA*i* allows for filtering **searches** by date range, country, language, category, subcategory, and medicine. Importantly, all the documents are stored in the same database and automatically kept up to date.
- The documents can be **automatically downloaded** from the database without redirecting the user to the HTA agency website.

**Table 1. Number of hits in NMA*i* database per category and country**

Country	Category	Hits
Sweden	Decision ( <i>Beslut</i> )	2,224
	Recommendation – including archived documents	672
Norway	Hospital ( <i>Sjukehus</i> )	4,721
	National Insurance Scheme ( <i>Folketrygd</i> )	356
Denmark	Medicines and indication extensions ( <i>Lægemidler og indikations-udvidelser</i> )	658
	Treatment guidelines and drug recommendations ( <i>Behandlings-vejledninger og lægemiddelrekommandationer</i> )	155
	Biosimilar medicines ( <i>Biosimilære lægemidler</i> )	7

### Sweden

- Decision documents are prepared by TLV and issue the outcome for a medicine to be included or not in the Swedish national healthcare reimbursement system.
- Recommendation documents are issued by the NT-council recommending or not the use of specialised and hospital therapies.

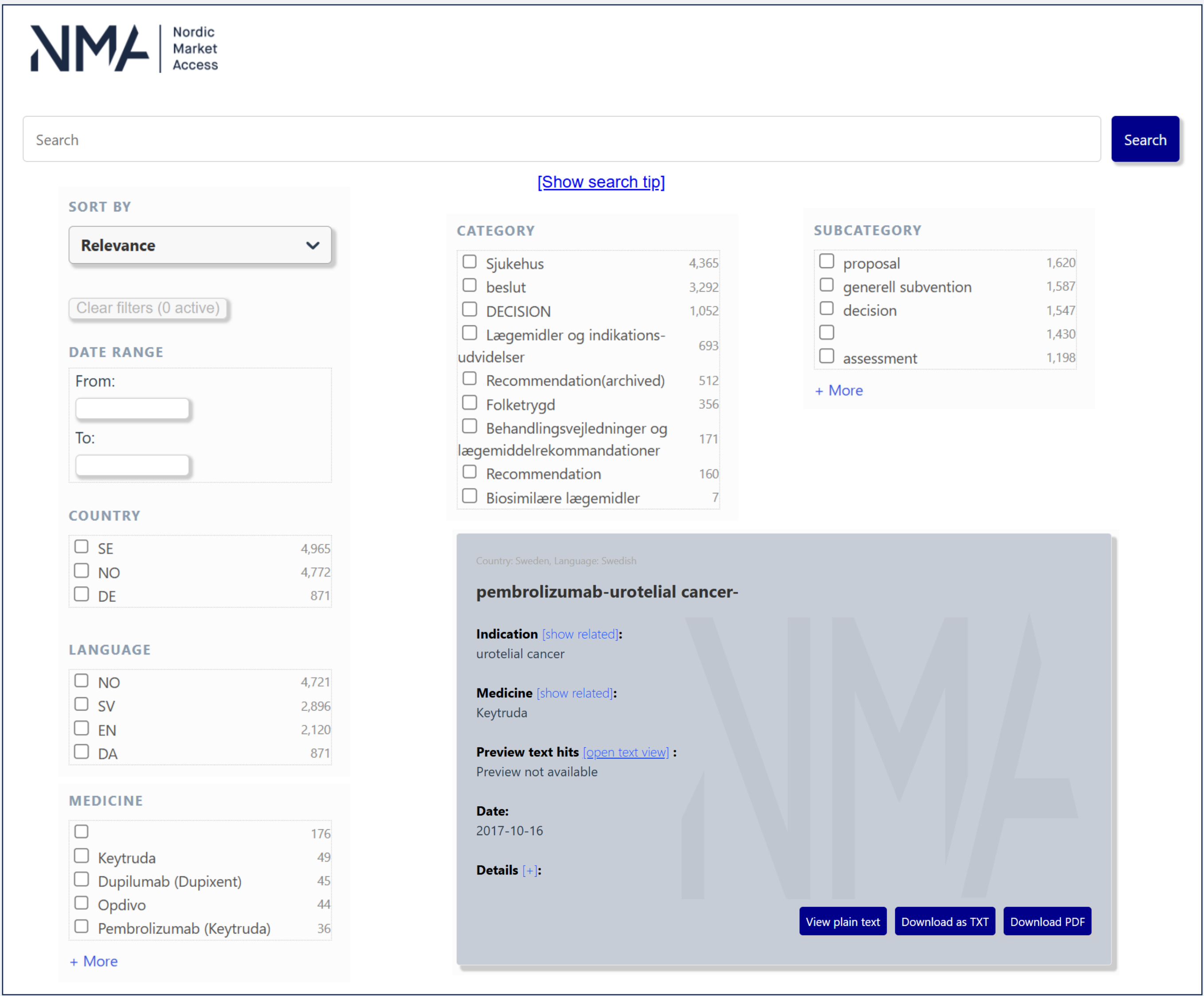
### Norway

- Hospital documents are prepared by the New Methods system and NOMA to cover hospital-based therapies.
- National Insurance Scheme documents are prepared by NOMA and include medicines that are or not reimbursed by the Norwegian reimbursement system.

### Denmark

- The DMC is the responsible agency for the preparation of documents related to medicines and indication extensions, treatment guidelines and drug recommendations, and biosimilar medicines.

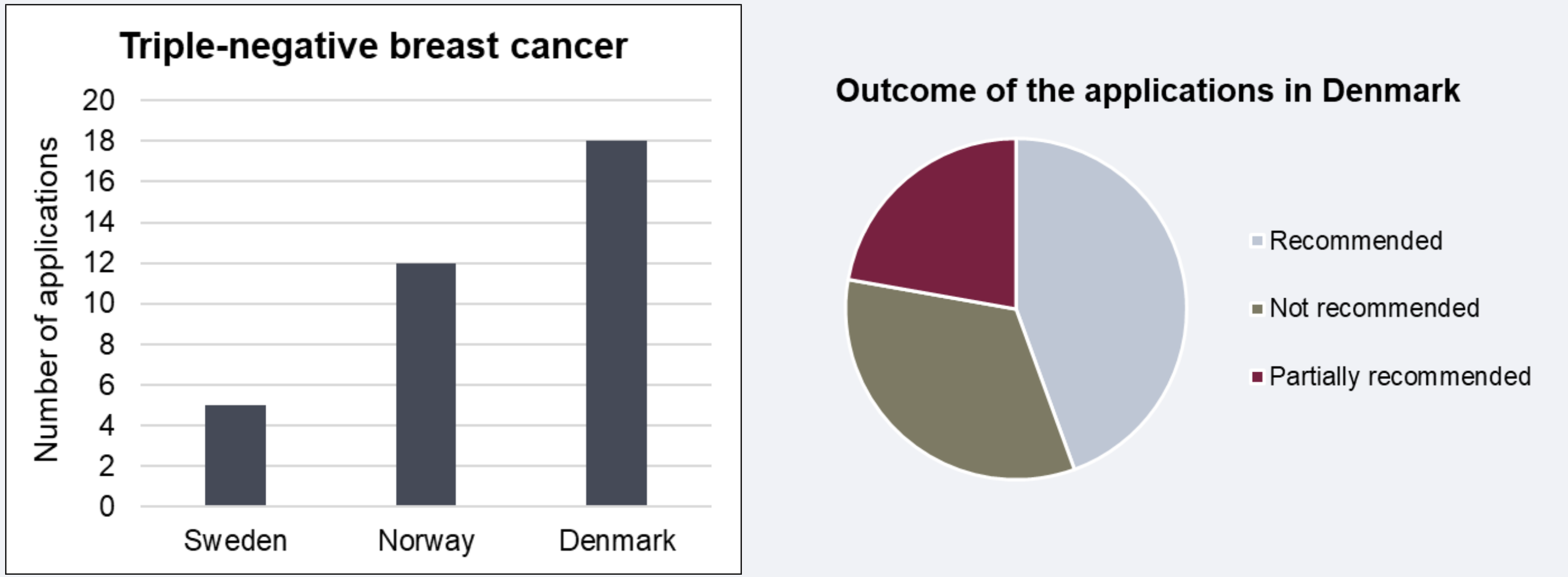
**Figure 2. NMA*i* database.** Documents stored in the database can be viewed as plain text files or downloaded as text files or as the original PDF document. The database automatically extracts the metadata from the documents and shows it under the details section.



## Results

Accessing all these documents from one unique database allows analysts to easily gather different types of information about the assessments for further analysis. Figure 3 presents one example of analysis.

**Figure 3. NMA*i* search and analysis.** Comparison of the number of applications related to triple-negative breast cancer in Sweden, Norway and Denmark (left). Outcome of the applications in Denmark (right).



## Discussion and conclusion

NMA*i* currently contains more than 10,000 documents from three HTA bodies in the Nordics, and it opens possibilities for different types of HTA analyses. Studies performed using NMA*i* can contribute to the understanding of how HTA decisions affect patients' access to medicines. In addition, NMA*i* is constantly developing; future modifications include the use of artificial intelligence and semantic searching. Finally, in the current European trend towards more unified HTAs, the NMA*i* database will be useful for comparing previously published assessments.

## References

<sup>1</sup>Tandvårds- och läkemedelsförmånsverket, TLV. Access at [www.tlv.se/](http://www.tlv.se/).  
<sup>2</sup>NT-rådet, Regionernas samverkansmodell för läkemedel. Access at <https://samverkanlakemedel.se/>.  
<sup>3</sup>Direktoratet for medisinske produkter, DMP. Access at <https://www.dmp.no/>.

<sup>4</sup>Nye metoder. Access at <https://www.nyemetoder.no/>.  
<sup>5</sup>Medicinrådet. Access at <https://medicinraadet.dk/>.