# $\mathsf{PT-073}$

## **Developing a future-proof database for the European Randomized Study of Screening for Prostate Cancer (ERSPC)**

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performed by 9 institutions in 8 European countries (the Netherlands, Sweden, Finland, Belgium, France (x2), has been curated and re-organized. The database is accessible for analysis of the integrated datasets by all participating institutes.

## Materials & Methods

The global ERSPC database IT infrastructure is based on the tranSMART-centric IT infrastructure developed by Philips within the CTMM-TraIT, CTMM-PCMM and Movember GAP3 projects. The tranSMART tm-curation pipeline has been used to curate the full dataset, and data has been loaded into the tranSMART platform using the tranSMART-batch pipeline. This infrastructure also offers support for collecting and combining yearly updates of the various large, longitudinal datasets from the participating institutes. Transfer of data takes place using the Secure Data Transfer tool provided by Philips.

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The global ERSPC database contains datasets of 268,538 patients, from nine institutes from eight countries. The clinical data has been gathered using a common data model, specifically designed to answer the research questions defined by the principal investigators at the start of the project. Data is organized in five main categories: Baseline, Attendance, Biopsies & Assessment, Diagnosis and Death. Attendance and Biopsies & Assessment each contain data from multiple rounds and visits. This data can be browsed through the web-based tranSMART platform, which is only accessible for a selected group of users. tranSMART supports a number of statistical analyses, such as survival analysis, logistic regression and correlation analysis. The ERSPC tranSMART instance is connected to R-studio and STATA to enable the statisticians to execute their own scripts on the database.

We show here that it is feasible to curate a global screening database that has been existing for 26 years, and to make it available in a future-proof statistical analysis environment, which enables researchers to browse and analyse the clinical data in a secure and efficient manner. The IT infrastructure will be used in future projects that handle large clinical datasets.

The ERSPC central database in its current form is supported by a grant of the EAU.



## Results

## Conclusions

## Acknowledgements