DigiONE aims to normalise 36 data concepts across 6 European countries to improve the management of cancer.

**Conceptual architecture for Digital Oncology Network for Europe (DigiONE) - an OMOP based European federated, automated cancer care quality ecosystem**

**Result 1:** The key features of DigiONE

1. Minimal Essential Description Of Cancer (MEDOC): 36 data concepts chosen by multi-country clinical consensus
2. Near-real time frontline feedback loops to improve data
3. Pan-format cancer data ingestion. Not just ETL also NLP, OCR
4. GDPR recital 34 privacy conserving solutions for NGS
5. Federation with open source Vantage6 to allow statistical analysis equivalent to centralised data, but without data pooling
6. Modular, protocolized implementation plans to solve for varying data normalisation skills in most hospitals. DigiONE places emphasis on care quality as the primary use case for data.
7. All in open standards and vendor agnostic

**Methods**

- DIGICORE invited care quality focused hospitals to apply for funding in a two-step implementation process.
- Entries were judged by an independent expert committee including patient representation.
- The prototype must achieve high routine data quality on the target dataset MEDOC with appropriate privacy management under GDPR.
- Six hospitals were awarded funding.

**Background:** Digital methods could provide nearly real-time information on clinical practice and outcomes with minimal to no manual retyping of data. This can allow analysis of real-time medical guideline compliance. However, there are many challenges such as EHR system heterogeneity, low data completeness in key clinical phenotype data, biomarker data often in PDFs, complicated definitions such as line of therapy, hospital IT capacity and privacy/GDPR. DigiONE tackles these challenges through an innovative, integrated multi-modal OMOP NLP solution with federation.