**Letter of intent**

<table>
<thead>
<tr>
<th>File number</th>
<th>175.2021.010</th>
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<td>Grant</td>
<td>2021/2022</td>
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**Applicant**

**Title**
Prospective Observational Cohort Study of Oesophageal-gastric cancer Patients: the Next Level (POCOP-NL)

**Abstract**
NWO domain: ZonMw  
Main research field: 23.40.00 Health sciences  
Other research fields: 23.80.00 Epidemiology, 16.40.00 Information systems, databases

**Short summary of project:**
Annually 4,000 persons are diagnosed with esophageal or gastric cancer (together referred to as esophagogastric cancer (EGC)) in the Netherlands. Most of our knowledge on the treatment of patients is based on randomized clinical trials (RCTs). Based on recent RCT results new and expensive drugs, so-called immune checkpoint inhibitors (ICIs), will be approved during the next years to be used in adjuvant and metastatic first-line treatment of patients with EGC. Although RCTs are regarded to provide the best evidence, they also use strict inclusion criteria which hamper the generalizability of the results. Often, this results in a lower benefit and higher toxicity of treatments in daily practice compared to the original RCT results. Therefore, there is an urgent need for a research infrastructure (RI) that can deliver data on treatments and outcomes of real-world patients with EGC.

The fundamentals for such an RI have been laid out by the Prospective Observational Cohort Study of Oesophageal-gastric cancer Patients (POCOP) project that started in 2015 and currently includes over 3000 patients. Within POCOP clinical data and patient reported outcomes (PROs) are collected with the aim to facilitate scientific research to improve the prognosis and Quality of Life (QoL) of patients with esophageal or gastric cancer. Although POCOP is successful in its current state, it is limited by the manual chart reviewing data collection for clinical data and it lacks a structure for the collection of PROs that are truly synchronized with the patient journey.

In this project we will set up a federated learning RI that enables analyses of data from electronic health records from participating Dutch hospitals in combination with the POCOP PRO and clinical databases. This will result in the possibility to analyze patient, disease and treatment characteristics and outcomes in near real-time and it will support the option to synchronize PRO collection with the actual patient journey. To further enhance research into physician-patient communication a connected infrastructure to efficiently visualize PROs and personalized prediction outcomes in the electronic patient files will also be built and implemented in the participating hospitals.

**Involved researchers:**
The proposed project has a multi-disciplinary group of involved researchers. The core group of researchers consist of the PI of the original POCOP project (medical oncologist), epidemiologists, data scientists and a medical psychologist. In addition, gastroenterologists, surgeons, radiation oncologists and medical oncologists, all with expertise in treating patients with EGC, from academic and non-academic participating hospitals throughout the Netherlands agreed to participate in this project.

**Collaboration with Roadmap GWI group:**
The proposed project aligns with the aim of the Health Sciences GWI group to set up a federated Dutch cohort infrastructure. Therefore, we reached out for collaboration with Health-RI (the institute leading this GWI group) regarding their GWI initiative on the federated Dutch cohort infrastructure.

**Organisation responsible for the application**

**Confirm letter of intent**
With submitting this form via ISAAC I declare to have filled in this form completely and truthfully.
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Applicant