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Exploring distinctive characteristics of gastrointestinal cancer diagnosed in patients below 50 years old compared to patients diagnosed at an older age in the Northern area of Spain

Submission date
17/04/2024

Recruitment status
Recruiting

Registration date
02/05/2024

Overall study status
Ongoing

Last Edited
16/05/2024

Condition category
Cancer

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Gastrointestinal cancers (cancers that develop in the digestive tract) are one of the most common diseases worldwide. Strikingly, the incidence of early onset gastrointestinal cancer (EOGIC) has been rising during the last decades and changes in lifestyle and environment seem to play a role. EOGIC has been defined as a different entity compared to on-average gastrointestinal cancer, with distinct clinical and molecular characteristics. There is an unmet need for a tailored approach to the management of these patients. The aim of this study is to characterize EOGIC patients in northern Spain.

Who can participate?
Patients with a new diagnosis of colorectal, gastroesophageal and pancreatic adenocarcinoma: EOGIC (up to 50 years old) and non-EOGIC (60-75 years old)

What does the study involve?
The demographic and clinical data of the patients will be collected. Lifestyle-related data will be obtained in questionnaires assessing diet, physical activity and the general quality of life of the patients before diagnosis. Biological samples will be collected before any cancer treatment including feces, blood and tumor tissue.

What are the possible benefits and risks of participating?
This is an observational study with no risks. Patients will not directly benefit from their participation in the study. The findings of this study could help to raise awareness and promote preventive behaviours. Molecular studies could lead to the identification of potential novel non-invasive biomarkers and therapeutic targets that would help in the development of the tailored clinical management of these patients, focusing on screening programs for early diagnosis and precision medicine.

Where is the study run from?
Health Research Institute of Navarra (IdiSNA) (Spain)

When is the study starting and how long is it expected to run for?
April 2023 to December 2026

Who is funding the study?
Carlos III Health Institute (Spain)

Who is the main contact?
Dr Maria Alsina, teogic@navarra.es

Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

ClinicalTrials.gov (NCT)
Nil known

Protocol serial number
PI23/01514

Study information

Scientific Title
Transversal study of early-onset gastrointestinal cancer

Acronym
TEOGIC

Study objectives
Patients with early onset gastrointestinal cancer (EOGIC, i.e. diagnosed in patients ≤50 years old) bear distinctive clinical, biological and lifestyle-related characteristics in comparison to patients with gastrointestinal cancer diagnosed at an on-average age (non-EOGIC).

Ethics approval required
Ethics approval required

Ethics approval(s)
approved 19/12/2023, Comité De Ética De La Investigación Con Medicamentos (Irunlarrea 3, Pamplona-Iruña, 31008, Spain; +34 (0)848422495; ceic@navarra.es), ref: PI_2023/144

Study design
Observational transversal and multicenter study

Primary study design
Observational

Study type(s)
Diagnostic, Other, Prevention, Quality of life, Screening

Health condition(s) or problem(s) studied
Gastrointestinal cancer: colorrectal adenocarcinoma, gastroesophageal adenocarcinoma, pancreatic adenocarcinoma

Interventions
Patients with a histologically confirmed new diagnosis of colorectal, gastroesophageal and pancreatic adenocarcinoma will be considered for two cohorts: EOGIC (≤50 years old) and non-EOGIC (60-75 years old), with a ratio of 1:2. After signing the unified informed consent, demographic and clinical data of the patients will be collected in a REDCap database. Lifestyle-related data will be obtained in questionnaires assessing diet, physical activity and the general quality of life of the patients before diagnosis. Biological samples will be obtained prior to any onco-specific treatment including feces, blood and tumor tissue (provided available material exists after all necessary determinations for cancer diagnosis and treatment) for the analysis of circulating inflammatory proteins, gut microbiota, and the proteome of the tumor microenvironment.

Intervention Type
Other

Primary outcome(s)
All data and samples will be collected at diagnosis, before patient has received any onco-specific treatment:
1. Histopathological characteristics:
1.1. Molecular characteristics to be recorded in FFPE tissue include MMR/MSI status by immunohistochemical analysis of mismatch-repair proteins (MLH1, MSH2, MSH6, and PMS2) as well as CD3 and CD8 infiltration in all tumors.
1.2. Additional molecular characteristics will also be measured according to tumor type: HER2 amplification status immunohistochemistry and fluorescence in situ hybridization-based confirmation when needed), KRAS, NRAS and BRAF mutations for CRC (qPCR with Idylla

equipment); HER2 overexpression/amplification status (immunohistochemistry and fluorescence in situ hybridization-based confirmation when needed), PDL1 (CPS), CLDN 18.2 and FGFR2b expression (immunohistochemistry) for GEC; and KRAS mutations (qPCR with Idylla equipment) for PC. For all tumors, Next-Generation Sequencing (NGS) analyses targeting cancer-related genes will be performed if a suitable sample is available.
2. Type and quality of life
2.1. Physical activity: Adapted GPAQ questionnaire
2.2. Quality of life: Adapted SF-36 questionnaire
2.3. Dietary habits: FFQ questionnaire (This questionnaire was developed fully in Spanish and based on dietary habits in the country, since its development it has also been updated in agreement with food composition tables for Spain)
3. Fecal microbiome: libraries will be prepared with the xGen Amplicon Panels for 16S and IST1 kit (IDT), which allows for the PCR-based enrichment on the 16S v2 V1-V9 rRNA regions. Thereafter, sequencing will be carried out on the Illumina NovaSeq platform.
4. Tumour microenvironment (proteome): Proteomic analyses will be conducted in the Proteomics unit of Navarrabiomed (ISO9001:2015 certified). Samples will undergo "in-gel" digestion, peptide reconstitution, and purification before identification by liquid chromatography-tandem mass spectrometry (LC-MS/MS), using the Ultimate 3000 RSLCnano system coupled with an Orbitrap Exploris 480 mass spectrometer (Thermo Fisher Scientific).
5. Circulating inflammatory and tumour inflammatory profile: A panel of 96 key proteins involved in tumoral and inflammatory processes will be assessed by the proximity extension assay (PEA) technology (Olink® Target 96 Immuno-Oncology).

Key secondary outcome(s))
Comparison between each tumor type, and pan-tumor between sexes using primary outcome measure data as above.

Completion date
31/12/2026

Eligibility

Key inclusion criteria
1. Newly diagnosed, histologically confirmed colorectal adenocarcinoma (CRC, group A), gastroesophageal adenocarcinoma (GEC, group B) and pancreatic adenocarcinoma (PC, group C)
2. Aged 18-50 years (both included) years old for the EOGIC group, and aged 60-75 years (both included) years old for the non-EOGIC group

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Upper age limit

75 years

Sex
All

Key exclusion criteria
1. Eastern Cooperative Oncology Group (ECOG) performance status of ≥3
2. Presence of comorbidities which may compromise participation of the patient in the study (mainly in terms of capability to complete the questionnaires)
3. Having received oncological treatment directed at the newly diagnosed cancer (i.e., at the time of inclusion the patient has not yet started any type of treatment, including surgery)

Date of first enrolment
01/01/2024

Date of final enrolment
31/12/2026

Locations

Countries of recruitment
Spain

Study participating centre
Navarra University Hospital-Hospital Universitario de Navarra (HUN)
Irunlarrea 3
Pamplona-Iruña
Spain
31008

Study participating centre
Miguel Servet Hospital-Hospital Miguel Servet (HMS)
Paseo de Isabel la Católica, 1-3
Zaragoza
Spain
50009

Study participating centre
University Hospital Donostia-Hospital Universitario de Donostia (HUD)
Paseo Doctor Beguiristain, s/n
Donostia-San Sebastián
Spain
20014

Study participating centre
San Pedro Hospital-Hospital San Pedro (HSP)
Calle Piqueras, 98
Logroño
Spain
26006

Study participating centre
Oncology Data Science Group (ODysSey)-Vall d´Hebron Institute of Oncology
Horta-Guinardó
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Sponsor information

Organisation
Navarre Institute of Health Research

ROR
https://ror.org/023d5h353

Funder(s)

Funder type
Government

Funder Name
Instituto de Salud Carlos III

Alternative Name(s)
SaludISCIII, InstitutodeSaludCarlosIII, Instituto de Salud Carlos III | Madrid, Spain, Carlos III Institute of Health, Institute of Health Carlos III, Carlos III Health Institute, La misión del Instituto de Salud Carlos III (ISCIII), ISCIII

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Spain

Results and Publications

Individual participant data (IPD) sharing plan
The data underlying this study cannot be shared publicly due to ethical restrictions. After publication of the study findings, data sharing will be considered upon request to the principal investigator/corresponding author Dr Maria Alsina (teogic@navarra.es).

IPD sharing plan summary
Other