

# LynxCare

**First published:** 01/02/2024

**Last updated:** 17/10/2024

Data source

Human

Hospital inpatient records

Other

## Administrative details

### Administrative details

**Data source ID**

1111153

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**Data source acronym**

LXC

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**Data holder**

[RWE HUB Consortium of Belgian hospitals](#)

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**Data source type**

Hospital inpatient records

Other

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**Data source type, other**

Electronic health records, Lab, medication, claims, radiology and pathology reports

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### **Main financial support**

Funding from industry or contract research

Funding from public-private partnership

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### **Care setting**

Hospital inpatient care

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### **Data source qualification**

If the data source has successfully undergone a formal qualification process (e.g., from the EMA, ISO or other certifications), this should be described.

Yes

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### **Description of the qualification**

EHDEN SME and datapartner. ISO27001 and NEN7510 certified

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### **Data source website**

<https://www.lynx.care>

## Contact details

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[georges@lynx.care](mailto:georges@lynx.care)

## Data source regions and languages

## Data source countries

Belgium

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## Data source languages

Dutch

French

## Data source establishment

### Data source established

15/06/2021

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### Data source time span

**First collection:** 01/01/2016

The date when data started to be collected or extracted.

## Publications

### Data source publications

[Cardiorenal metabolic syndrome: clinical features and SGLT2i eligibility in a real-world heart failure cohort](#)

[What Can We Expect Following Anterior Total Hip Arthroplasty on a Regular Operating Table? A Validation Study of an Artificial Intelligence Algorithm to Monitor Adverse Events in a High-Volume, Nonacademic Setting](#)

[Validation of an Artificial Intelligence driven framework to automatically detect red flag symptoms in screening for rare diseases in electronic health records](#)

[Detection of cardiac ATTR Amyloidosis in a real-world HF population by Natural Language Processing guided automated data extraction from EHRs](#)

Practical Implementation of the Comprehensive Geriatric Assessment to Optimise Care for Older Adults with Cancer.

## Studies

### List of studies that have been conducted using the data source

Leveraging Digital Technology and Artificial Intelligence to Describe the Real World Belgian Chronic Lymphocytic Leukemia Patient Population [BE-CLLEAR]

Real-world disease, patient characteristics and treatment patterns in patients with Non-Small Cell Lung Cancer and extensive stage Small cell lung cancer in Belgium [AIBED]

Real-world hospital treatment patterns in Belgium in early lung cancer between 2018 and 2023: a secondary data analysis [BE-LUNG]

Real-World Molecular Subtypes and Characteristics of Breast Cancer in Belgium: Insights from Routinely Collected Data [BE-REAST]

## Data elements collected

### The data source contains the following information

#### **Disease information**

Does the data source collect information with a focus on a specific disease? This might be a patient registry or other similar initiatives.

Yes

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## **Rare diseases**

Are rare diseases captured? In the European Union a rare disease is one that affects no more than 5 people in 10,000.

Yes

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## **Pregnancy and/or neonates**

Does the data source collect information on pregnant women and/or neonatal subpopulation (under 28 days of age)?

No

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## **Hospital admission and/or discharge**

Yes

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## **ICU admission**

Is information on intensive care unit admission available?

Yes

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## **Cause of death**

Captured

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## **Cause of death vocabulary**

SNOMED

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## **Prescriptions of medicines**

Captured

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## **Prescriptions vocabulary**

ATC

RxNorm

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## **Dispensing of medicines**

Captured

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### **Dispensing vocabulary**

ATC

RxNorm

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### **Advanced therapy medicinal products (ATMP)**

Is information on advanced therapy medicinal products included? A medicinal product for human use that is either a gene therapy medicinal product, a somatic cell therapy product or a tissue engineered products as defined in Regulation (EC) No 1394/2007 [Reg (EC) No 1394/2007 Art 1(1)].

Yes

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### **Contraception**

Is information on the use of any type of contraception (oral, injectable, devices etc.) available?

Yes

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### **Indication for use**

Does the data source capture information on the therapeutic indication for the use of medicinal products?

Captured

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### **Indication vocabulary**

ICD-10

SNOMED

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### **Medical devices**

Is information on medicinal devices (e.g., pens, syringes, inhalers) available?

Yes

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### **Administration of vaccines**

Yes

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## **Procedures**

Does the data source capture information on procedures (e.g., diagnostic tests, therapeutic, surgical interventions)?

Captured

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## **Procedures vocabulary**

ICD-10

Other

SNOMED

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## **Procedures vocabulary, other**

Riziv codes

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## **Healthcare provider**

Is information on the person providing healthcare (e.g., physician, pharmacist, specialist) available?  
The healthcare provider refers to individual health professionals or a health facility organisation licensed to provide health care diagnosis and treatment services including medication, surgery and medical devices.

Yes

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## **Clinical measurements**

Is information on clinical measurements (e.g., BMI, blood pressure, height) available?

Yes

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## **Genetic data**

Are data related to genotyping, genome sequencing available?

Not Captured

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## **Biomarker data**

Does the data source capture biomarker information? The term “biomarker” refers to a broad subcategory of medical signs ( objective indications of medical state observed from outside the patient), which can be measured accurately and reproducibly. For example, haematological assays,

infectious disease markers or metabolomic biomarkers.

Captured

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### **Biomarker data vocabulary**

Other

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### **Biomarker vocabulary, other**

LOINC

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### **Patient-reported outcomes**

Is information on patient-reported outcomes (e.g., quality of life) available?

No

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### **Patient-generated data**

Is patient-generated information (e.g., from wearable devices) available?

No

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### **Units of healthcare utilisation**

Are units of healthcare utilisation (e.g., number of visits to GP per year, number of hospital days) available or can they be derived? Units of healthcare utilisation refer to the quantification of the use of services for the purpose of preventing or curing health problems.

Yes

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### **Unique identifier for persons**

Are patients uniquely identified in the data source?

Yes

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### **Diagnostic codes**

Captured

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### **Diagnosis / medical event vocabulary**

ICD-10

SNOMED

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### **Medicinal product information**

Captured

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### **Medicinal product information collected**

Active ingredient(s)

Brand name

Dosage regime

Dose

Route of administration

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### **Medicinal product vocabulary**

ATC

RxNorm

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### **Quality of life measurements**

Not Captured

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### **Lifestyle factors**

Captured

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### **Lifestyle factors**

Alcohol use

Tobacco use

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### **Sociodemographic information**

Captured

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### **Sociodemographic information collected**

Age

Gender

## Quantitative descriptors

### Population Qualitative Data

#### **Population age groups**

Paediatric Population (< 18 years)

Preterm newborn infants (0 - 27 days)

Term newborn infants (0 - 27 days)

Infants and toddlers (28 days - 23 months)

Children (2 to < 12 years)

Adolescents (12 to < 18 years)

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Elderly ( $\geq$  65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

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#### **Estimated percentage of the population covered by the data source in the catchment area**

around 10% of the Belgian population (biggest coverage in the Flemish region at this moment)

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#### **Description of the population covered by the data source in the catchment area whose data are not collected (e.g., people who are**

**registered only for private care)**

all inpatient care

## Population

### **Population size**

1100000

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### **Active population size**

250000

## Data flows and management

## Access and validation

### **Governance details**

Documents or webpages that describe the overall governance of the data source and processes and procedures for data capture and management, data quality check and validation results (governing data access or utilisation for research purposes).

<https://www.lynx.care/technology#How-it-works>

### **Biospecimen access**

Are biospecimens available in the data source (e.g., tissue samples)?

No

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### **Access to subject details**

Can individual patients/practitioners/practices included in the data source be contacted?

Yes

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### **Description of data collection**

Source data concerns patient data that is routinely collected during normal course of treatment in the past. Data is recorded for research by uploading the hospital's source data (if relevant for the therapeutic area) via a secure gateway onto the LynxCare data processing platform, where it is stripped of direct identifiers and stored in a RWE datawarehouse (in OMOP Common Data Model) for each hospital. Batch updates of source data are performed in the same fashion.

## Event triggering registration

### **Event triggering registration of a person in the data source**

Disease diagnosis

Start of treatment

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### **Event triggering de-registration of a person in the data source**

Death

Loss to follow up

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### **Event triggering creation of a record in the data source**

The admission in the hospital for a treatment (procedure, medication)

## Data source linkage

### **Linkage**

Is the data source described created by the linkage of other data sources (prelinked data source) and/or can the data source be linked to other data source on an ad-hoc basis?

Yes

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### **Linkage description, possible linkage**

Each of the participating hospitals is linked to this database to retrieve all-cause mortality data on active their patients.

## Linked data sources

### **Pre linked**

Is the data source described created by the linkage of other data sources?

No

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### **Data source, other**

Kruispunt databank

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### **Linkage variable**

social security number

### **Pre linked**

Is the data source described created by the linkage of other data sources?

Yes

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### **Data source, other**

RIZIV (Belgian HTA) invoiced amounts

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### **Linkage variable**

the nomenclature code is the linkage key

## Data management specifications that apply for the data source

**Data source refresh**

Quarterly

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**Informed consent for use of data for research**

Not Required

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**Possibility of data validation**

Can validity of the data in the data source be verified (e.g., access to original medical charts)?

Yes

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**Data source preservation**

Are records preserved in the data source indefinitely?

No

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**Data source preservation length (years)**

50 years

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**Approval for publication**

Is an approval needed for publishing the results of a study using the data source?

Yes

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**Data source last refresh**

31/12/2022

## Common Data Model (CDM) mapping

**CDM mapping**

Has the data source been converted (ETL-ed) to a common data model?

Yes

**CDM Mappings**

**CDM name**

OMOP

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**CDM website**

<https://www.ohdsi.org/Data-standardization/>

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**Data source ETL CDM version**

5.4

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**Data source ETL status**

Completed