Cancer RADAR

mapping cancer risk among individuals with a migration background across Europe

Nienke (C.J.) Alberts

D. Georges, Dr. A. Gini, Dr. I. Man, Dr. F. Bray, Dr. I. Baussano - International Agency for Research on Cancer, Lyon;
Dr. S. Rosso, Dr. E. Migliore, Prof. Dr. L. Richiardi - University of Turin - Piedmont Cancer Registry;
Dr. J. Galceran, Dr. M. Carulla - Cancer registry of Tarragona, Reus, Spain;
Dr. A Bordoni, Dr. L. Ortelli - Cancer Registry of canton Ticino, Switzerland;
Dr. M.D. Chirlaque López, Dr. A. Sánchez Gil - Cancer registry of Murcia, Spain;
Dr. K. Van Herck, Dr. F. Verdoodt - Belgian Cancer Registry, Brussels, Belgium;
Dr. O. Visser - Netherlands Comprehensive Cancer Organization (IKNL), Utrecht, The Netherlands;
Dr. J. Didkowska and Dr. U Wojciechowska - Polish National Cancer Registry, Poland

No conflict of interest

February 2022

February 2022

Migration

- **Data is not collected in a systematic way**
- **Harmonization of this data across countries/ registries is challenging**

February 2022

October 2023

Migration

The lack of evidence and data has hindered the development of policies and programmes to achieve the SDGs *(26)* for migrants, refugees and other displaced populations. It has also limited progress towards the objectives of the Global Compact for Safe, Orderly and Regular Migration (GCM) *(27)*, the Global Compact on Refugees *(28,29)* and the WHO Global action plan on promoting the health of refugees and migrants, 2019–2030 *(30)*.

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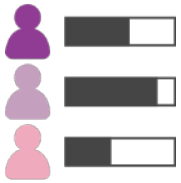
map cancer risk among migrants across Europe

Objectives

Preparation phase: Co-created a protocol to systematically collect cancer data stratified by birth country.

Objective 1: Collect real-world data to quantify cancer risk among migrants



Objective 2: Estimate the expected and preventable burden of cancer cases among migrants.

Objective 3: Assess the resources needed to scale up cancer elimination strategies for migrant populations.

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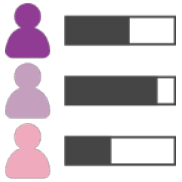
map cancer risk among migrants across Europe

Objectives	Where we are now
 Preparation phase: Co-created a protocol to systematically collect cancer data stratified by birth country.	- Involved 7 pilot registries
 Objective 1: Collect real-world data to quantify cancer risk among migrants	- Availability of data in EU - Pilot registry data results
 Objective 2: Estimate the expected and preventable burden of cancer cases among migrants.	
 Objective 3: Assess the resources needed to scale up cancer elimination strategies for migrant populations.	

Protocol for data collection

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cancer.radar@iarc.who.int

Cancer RADAR:
assess the current risk and preventable burden of cancer among individuals with a migration background across Europe

version October 2024

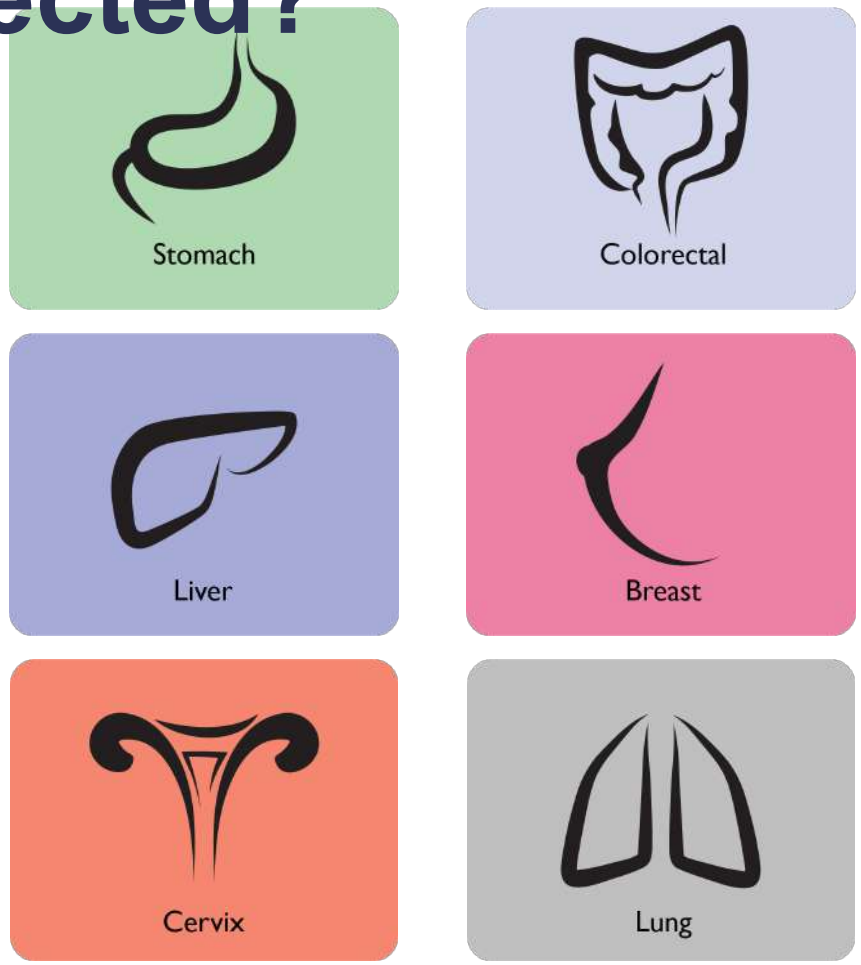
IACR International Association of Cancer Registries

International Agency for Research on Cancer
World Health Organization

Amsterdam UMC
Universitair Medische Centra

cancer.radar@iarc.who.int

What data will be collected?



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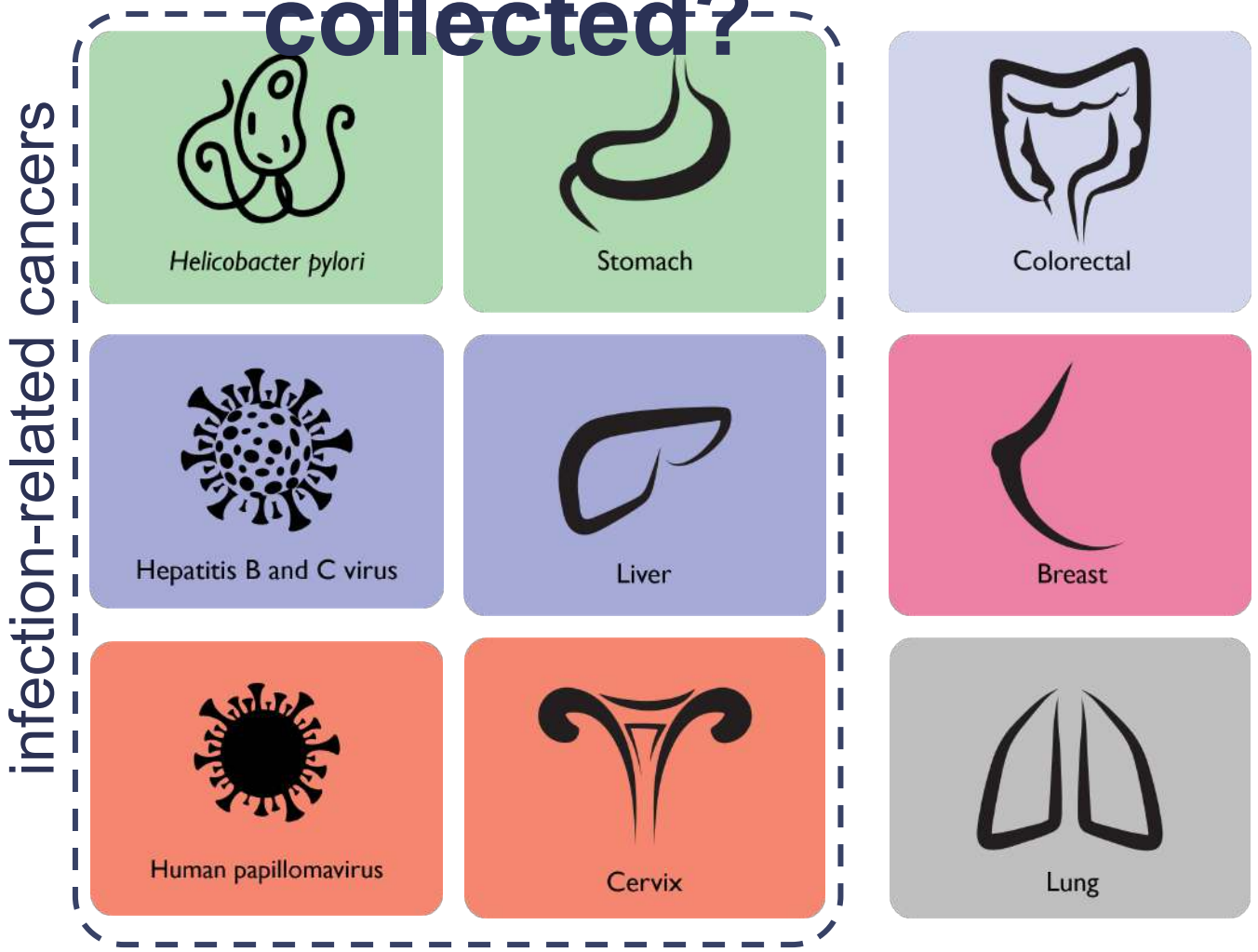

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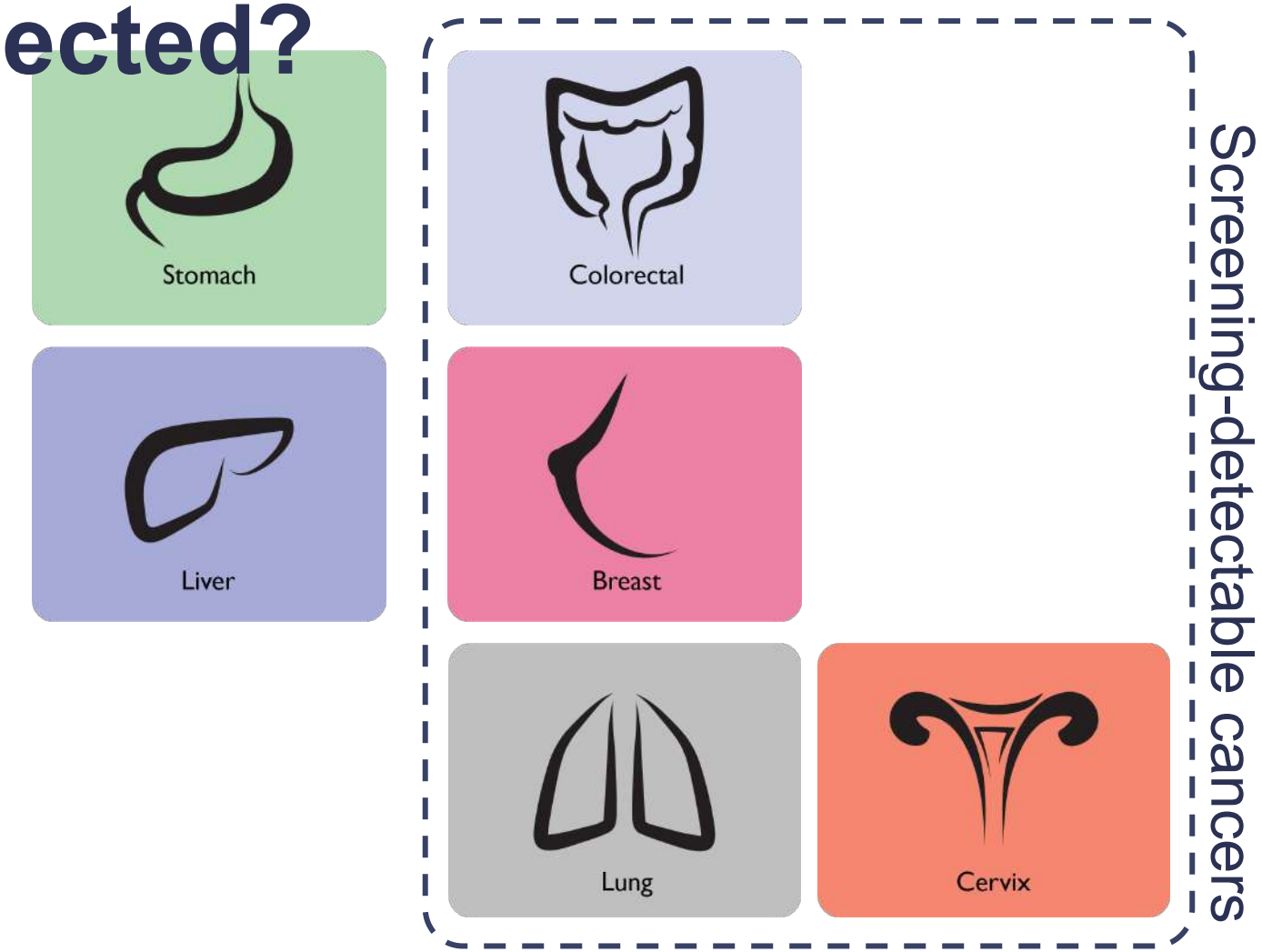

What is a ‘migrant’?

Birth-country of a person:

- ✓ Often routinely collected for administrative purposes
- ✓ Objective and an unchanging attribute
- ✓ Birth-country refers to first-generation migrant
- ✓ Birth-country a proxy for ethnicity

AI generated figures

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	Objectives	Where we are now
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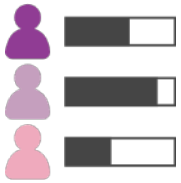	Objective 2: Estimate the expected and preventable burden of cancer cases among migrants.	
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Availability and feasibility of data collection

- Survey was sent to 104 cancer registries in Europe.
- Received responses from 77% (79/104) cancer registries across Europe
- 69% registries representing 20 countries expressed a positive intention to participate: 60% have data in-house and 9% need to retrieve

Reasons to share data

- Sufficient time
- Important
- Important to do this together within a network
- Aligns with other initiatives

Barriers to share data

- Limited staff capacity to collect and clean the data
- No budget
- Data sharing/retrieval is complex
- Potential high cost of data linkage and retrieval

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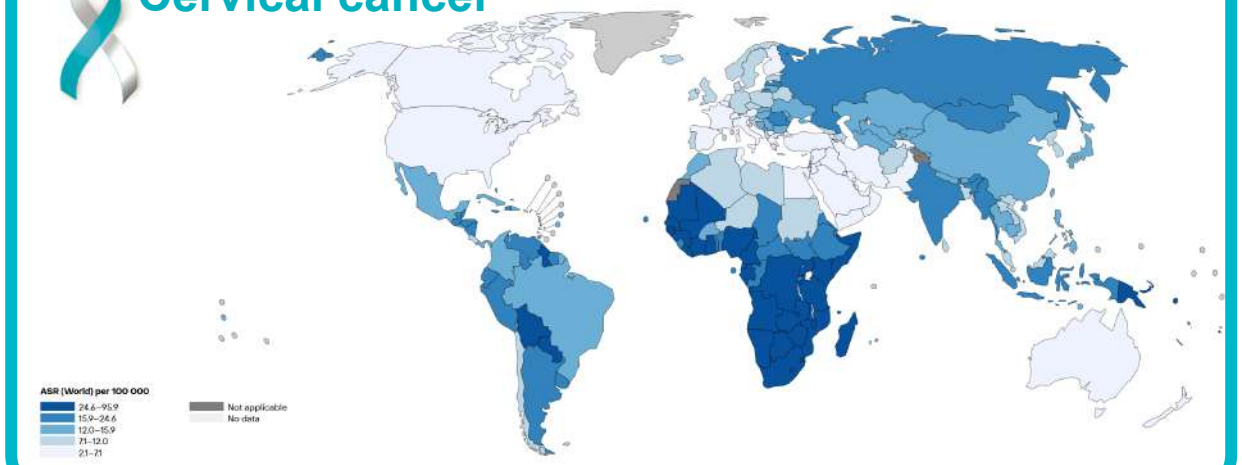
Pilot data across 4 registries in Europe:
breast and cervical cancer as an example

Cervical cancer

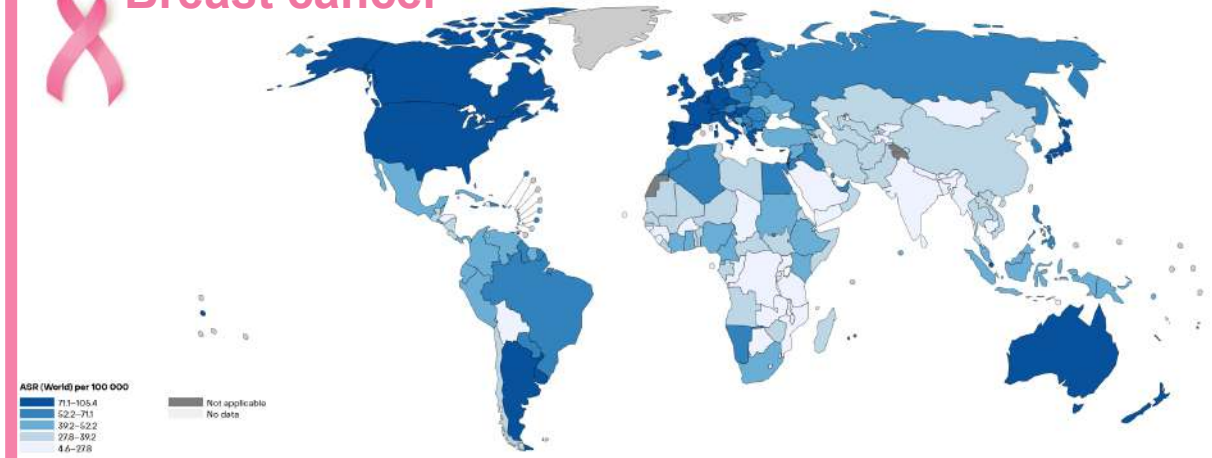


Grouped by ASIR in birth country:

Cervical cancer ASIR categories:

- High = >22
- Intermediate-high = 14-22
- Intermediate-low = 8.1-13
- Low = ≤8

Breast cancer



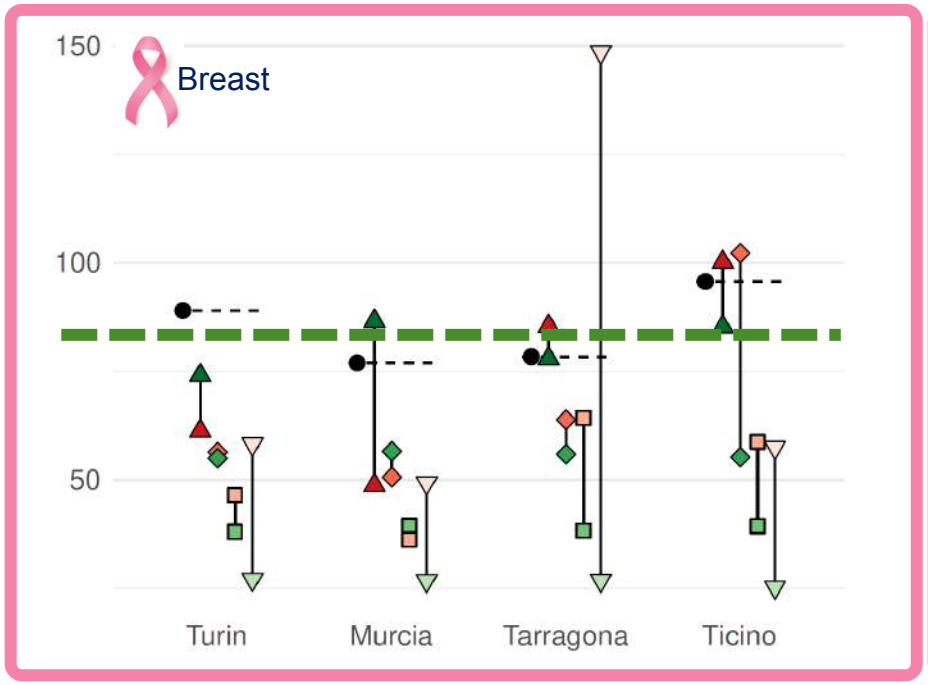
Breast cancer ASIR categories:

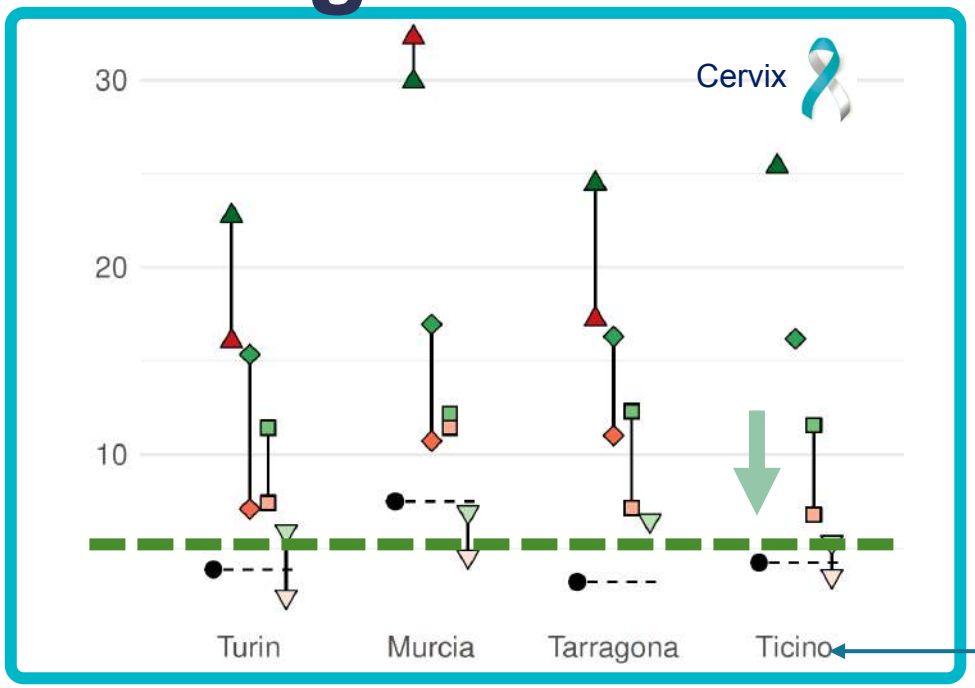
- High = >65
- Intermediate-high = 46-65
- Intermediate-low = 31.1-46
- Low = ≤31

ASIR = age-standardized incidence rate

Pilot data across 4 registries in Europe

ASIR

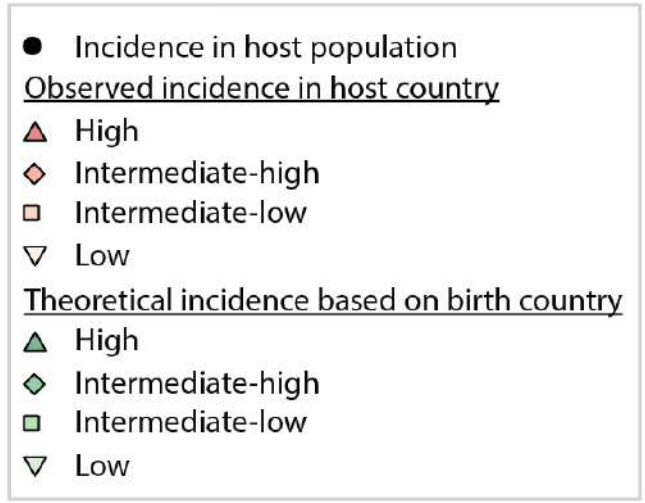




Registries

Dashed-line represents the ASIR in the host population:

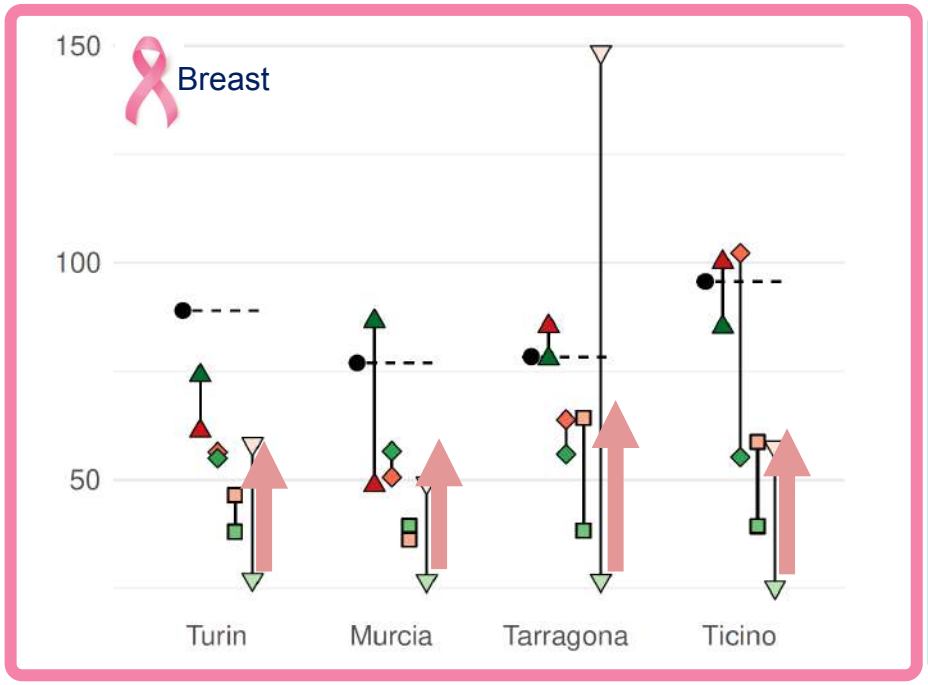
- ASIR for breast cancer (as we know) is high
- ASIR for cervical cancer in host pop. is close to the WHO elimination threshold of 4 / 100.000 py

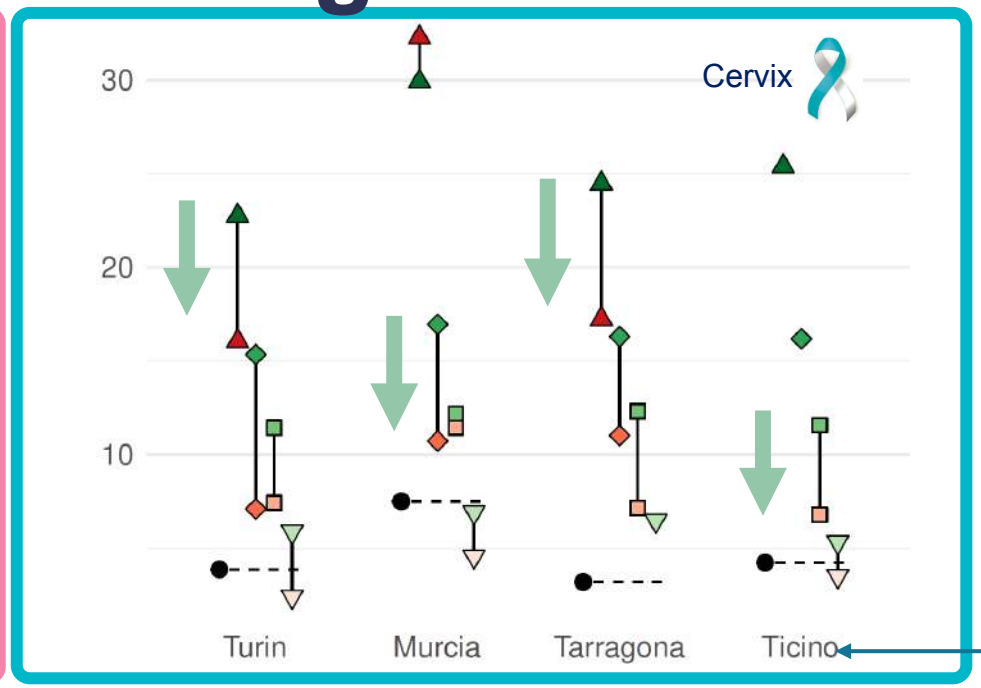


ASIR = age-standardized incidence rate

Pilot data across 4 registries in Europe

ASIR





Registries

Dashed-line represents the ASIR in the host population:

- ASIR for breast cancer (as we know) is high
- ASIR for cervical cancer in host pop. is close to the WHO elimination threshold of 4 / 100.000 py

The theoretical ASIR compared to the observed ASIR is:

- higher for cervical cancer
- lower/similar for breast cancer

i.e. the risk in migrant population converges towards the risk in the host

- Incidence in host population

Observed incidence in host country
- High
- Intermediate-high
- Intermediate-low
- Low

Theoretical incidence based on birth country
- High
- Intermediate-high
- Intermediate-low
- Low

ASIR = age-standardized incidence rate

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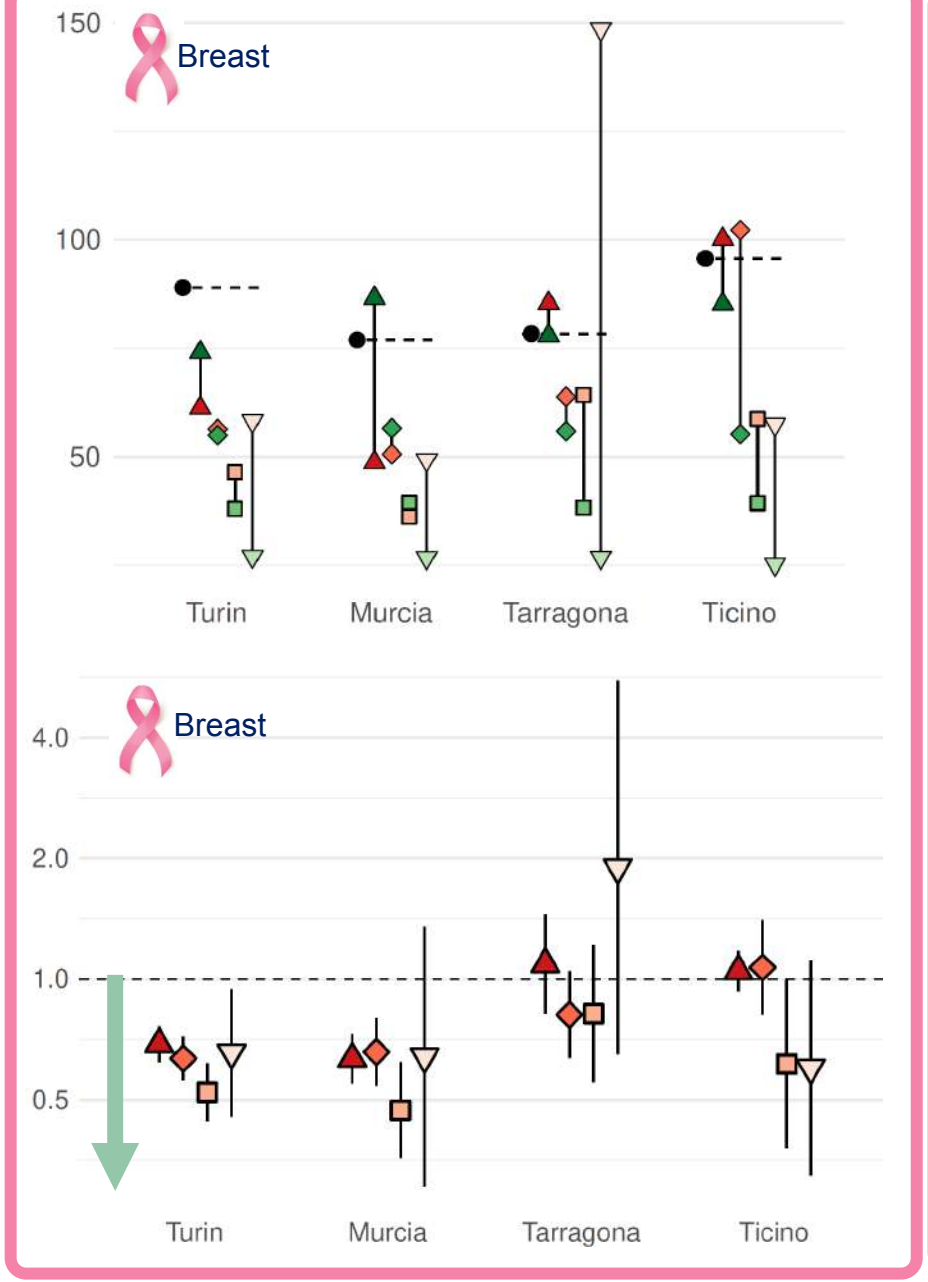
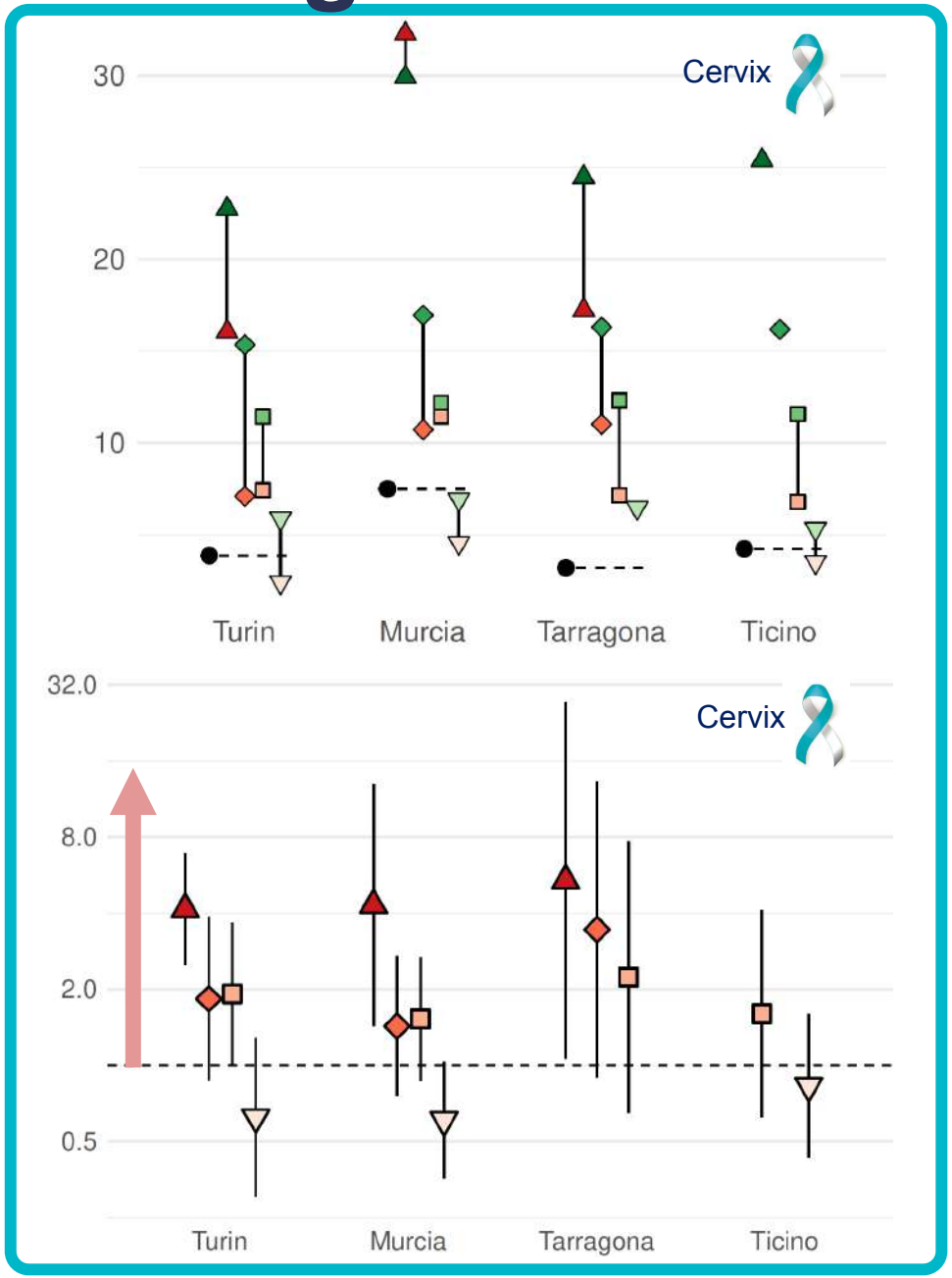
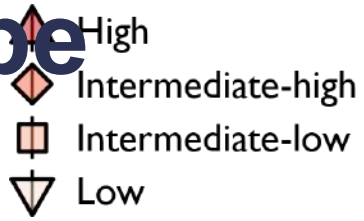
Pilot data across 4 registries in Europe

ASIR

ASIR ratio







-Migrants have a significantly higher ASIR for **cervical cancer** compared to the host population.

-For **breast cancer**, migrants have a similar or lower ASIR compared to the host population.

-The cervical cancer **ASIR in a migrant's birth country** is a good proxy for their ASIR in the host country. This pattern does not hold for breast cancer.

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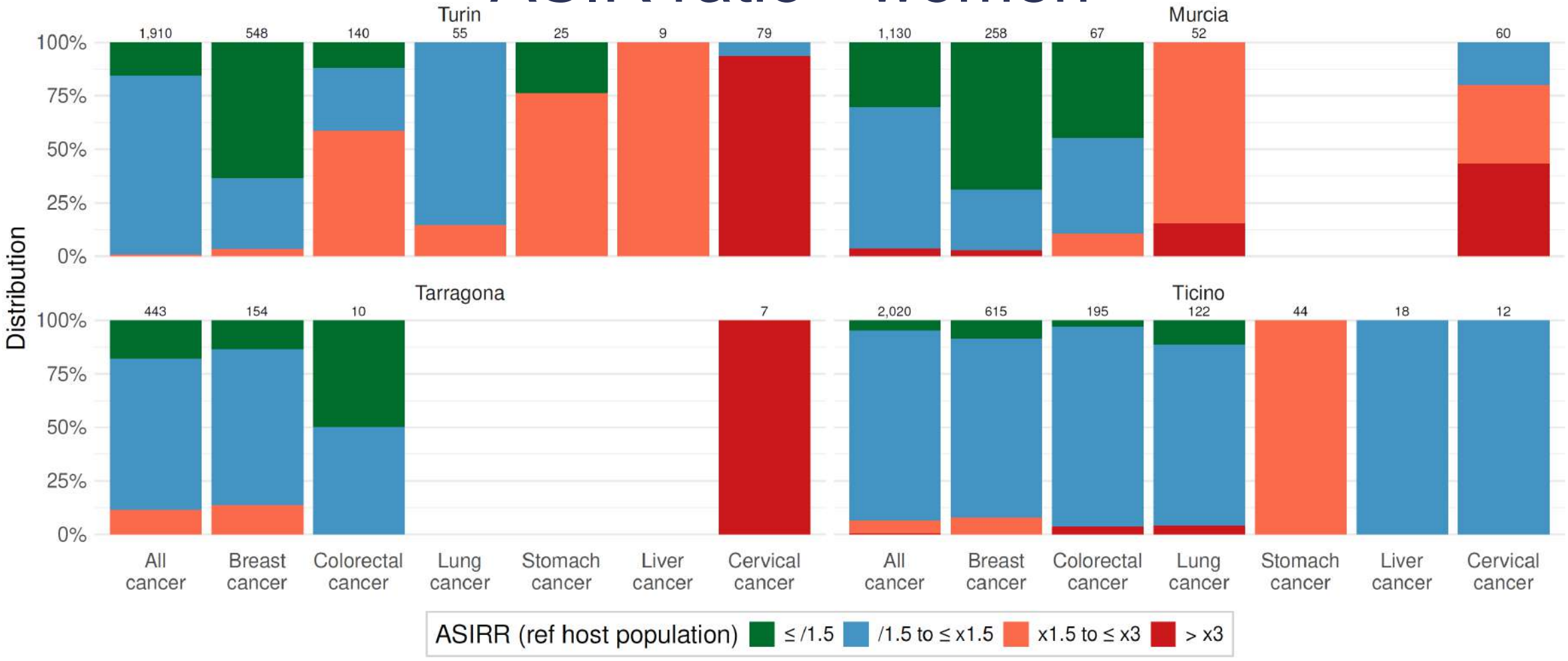
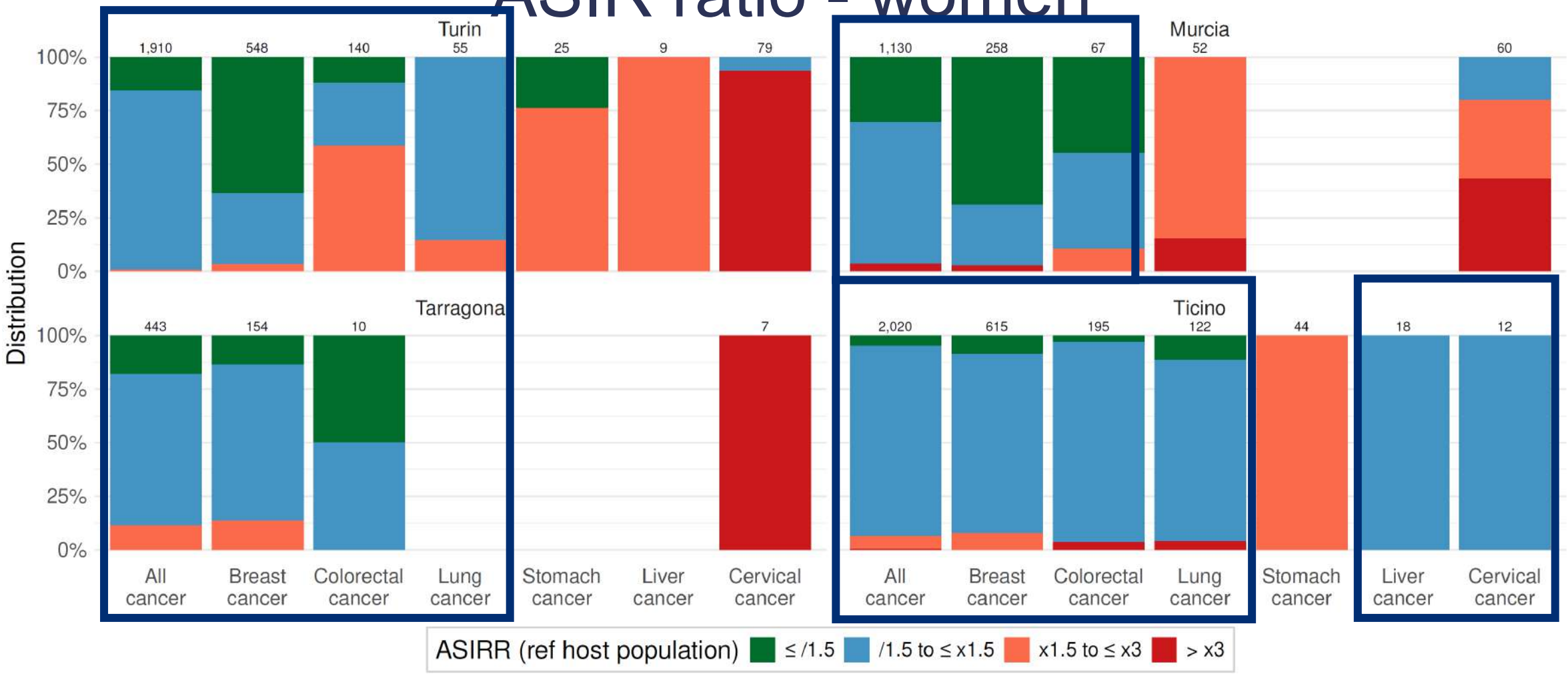
Pilot data across 4 registries in Europe:
ASIR ratio - women



What proportion of migrants have a lower (green), similar (blue), or higher (orange/red) ASIR when compared to the host population?

Pilot data across 4 registries in Europe:

ASIR ratio - women



- For most cancer types, migrants tend to have a similar (blue) or lower (green) ASIR when compared to the host population.

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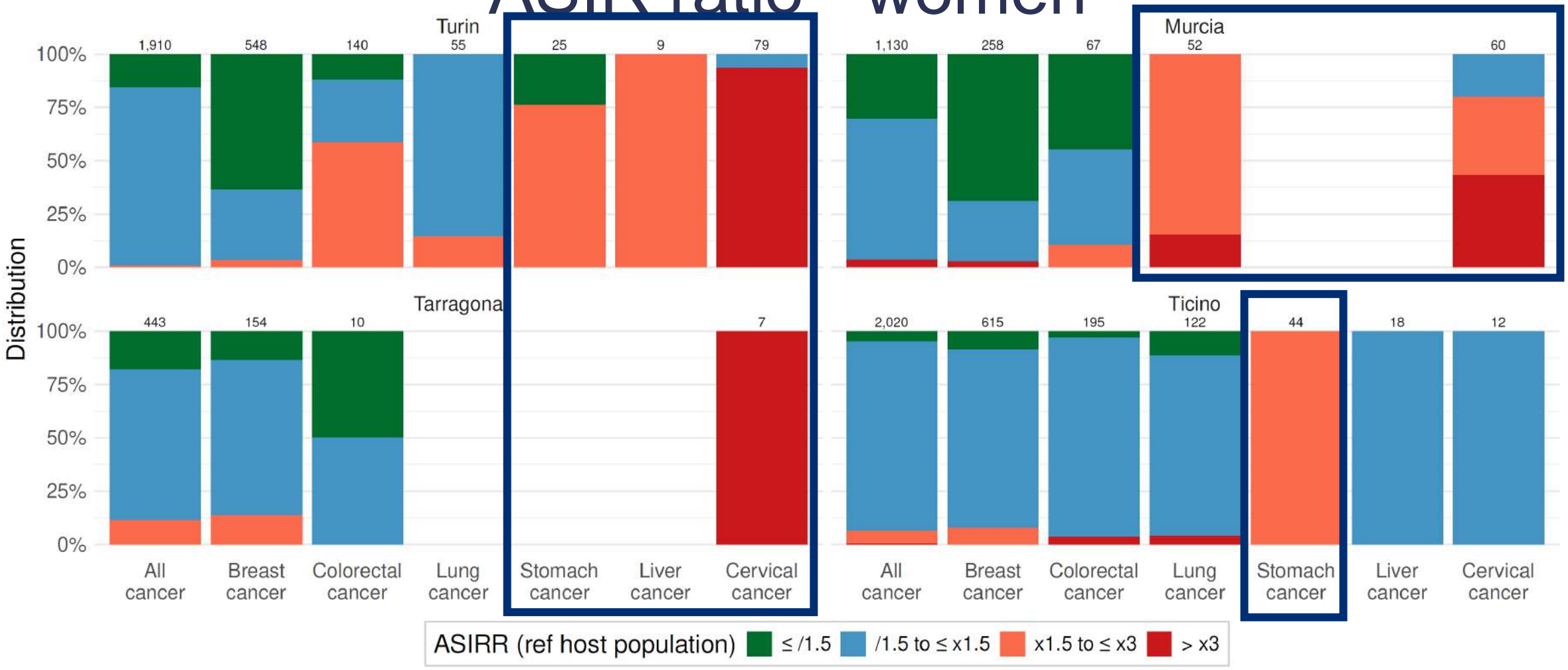
Pilot data across 4 registries in Europe:
ASIR ratio - women



- For most cancer types, migrants tend to have a similar (blue) or lower (green) ASIR when compared to the host population.
- For infection-related cancers, the ASIR is often higher (orange/red) among migrants than in the host population.

Pilot data across 4 registries in Europe

We can draw three conclusions from the data processing:

- Data are available locally at the highest possible level of detail.
- Analyses can be conducted in a decentralized manner, safeguarding small cell counts and ensuring anonymity.
- Coordinated international analyses enable more meaningful conclusions than those possible from individual countries or registries alone.

Protocol

Impact

- Improve the **health of migrants**
- Characterize **knowledge gaps** to increase awareness
- Inform **public health decision** making and stakeholder's **actions**
- Make the **data openly** accessible to help induce policy change
- Use the infrastructure and the lessons-learned in Europe, expand data collection to other regions in the world

- **Note: We must be aware that this data and findings can be interpreted differently according to different sets of values. Our goal is to communicate the results of this work to promote equity-focused policy-making.**

c.j.alberts@amsterdamumc.nl
cancer.radar@iarc.who.int


I. Baussano


C.J. Alberts


D. Georges


S. Rosso


F. Bray

Cancer RADAR working group:

D. Georges, Dr. A. Gini, Dr. I. Man, Dr. F. Bray, Dr. I. Baussano - International Agency for Research on Cancer, Lyon; **Dr. S. Rosso, Dr. E. Migliore, Prof. Dr. L. Richiardi** - University of Turin - Piedmont Cancer Registry; **Dr. J. Galceran, Dr. M. Carulla** - Cancer registry of Tarragona, Reus, Spain; **Dr. A Bordoni, Dr. L. Ortelli** - Cancer Registry of canton Ticino, Switzerland; **Dr. M.D. Chirlaque López, Dr. A. Sánchez Gil** - Cancer registry of Murcia, Spain; **Dr. K. Van Herck, Dr. F. Verdoodt** - Belgian Cancer Registry, Brussels, Belgium; **Dr. O. Visser** - Netherlands Comprehensive Cancer Organization (IKNL), Utrecht, The Netherlands; **Dr. J. Didkowska and Dr. U Wojciechowska** - Polish National Cancer Registry, Poland

DECISION MODELING CENTER

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IACR International Association of Cancer Registries

Amsterdam UMC

International Agency for Research on Cancer
World Health Organization

GGD Amsterdam

ZonMw (VENI grant number 09150162210124)

Methodology – stratified by birth-country

Cancer risk =

Numerator

- Stomach (C16)
- Liver (C22.0)
- Cervix uteri (C53)
- Breast (C50)
- Colorectal (C18-20)
- Lung (C33-34)

Denominator

- Population-at-risk
- All — All cancers (C00-97/C44)

PIR = Proportional incidence ratio
Source: P Boyle, D.M. Parkin, Ch11, IARC, 1995

Data collection

Step 1 - Data collection:
- by 5-year age groups
- by CI5 collection periods (2013-2017, 2008-2012, 1003-2007)

Step 2 - Data processing:
- highly-aggregated estimates i.e. anonymous data

Step 3 - Data sharing