EU CanScreen
European Joint Action on Cancer Screening

EUCanScreen JOINT STAKEHOLDER CONFERENCE

Session 3:
Data-based innovation & the Future of Personalized Screening

Complementarity with EU cancer data initiatives

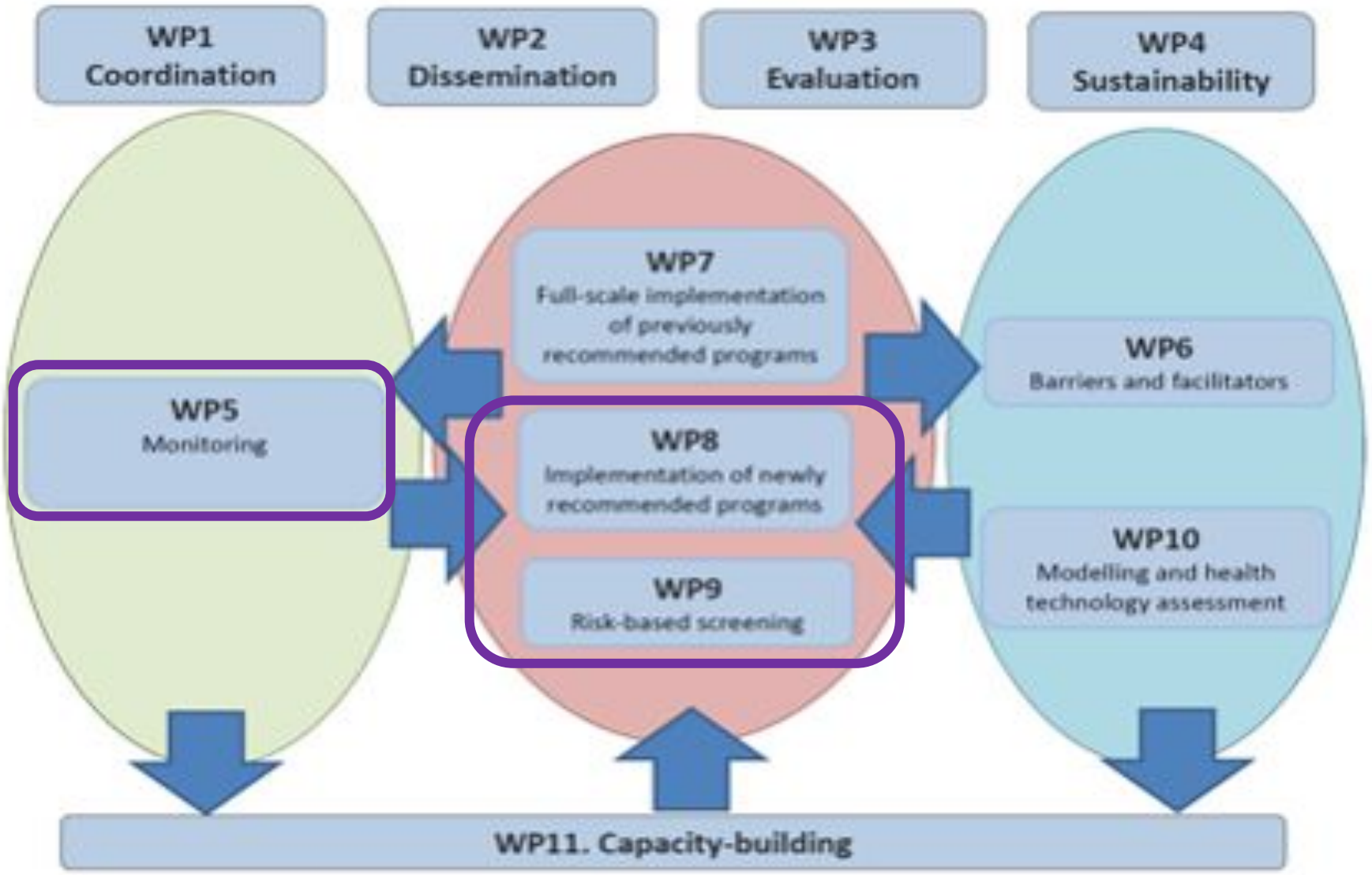
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WP1
Coordination
WP2
Dissemination
WP3
Evaluation
WP4
Sustainability
WP7
Full-scale implementation of previously recommended programs
WP5
Monitoring
WP8
Implementation of newly recommended programs
WP9
Risk-based screening
WP6
Barriers and facilitators
WP10
Modelling and health technology assessment
WP11. Capacity-building

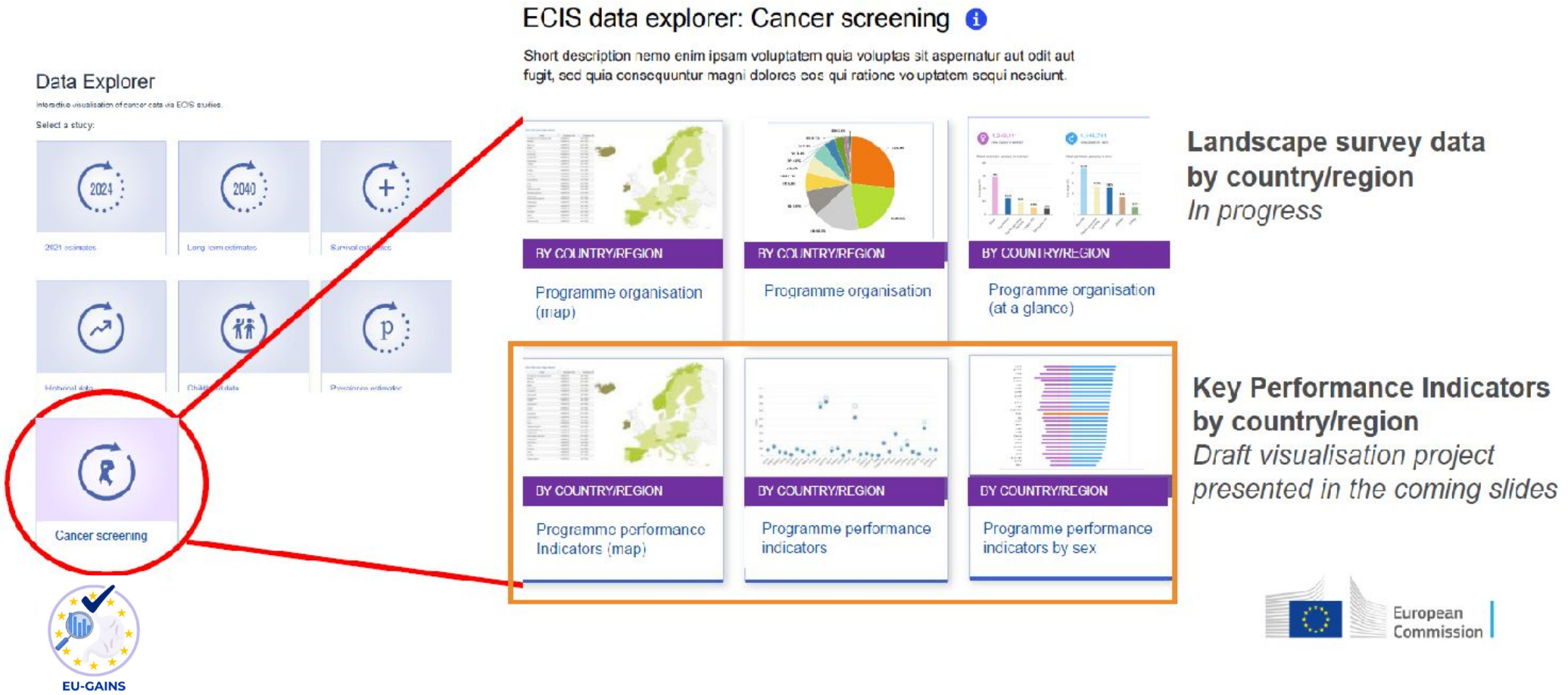
Mapping KPIs

Indicator Categories	Indicators
1. **Risk assessment and invitation**	1. Risk assessment 2. Invitation Coverage *Lung* smoking cessation
2. Screening and triage	3. Examination Coverage 4. Participation Rate 5. Retention Rate 6. Test result 7. Positive Predictive Value Screening test 8. False Positive Rate 9. Episode Sensitivity 10. Compliance with triage *Lung/cervix* Compliance with early rescreen

Mapping KPIs

Indicator Categories	Indicators
3. Further Assessment	11. Compliance with Further Assessment 12. Detection rate *Lung* Unnecessary biopsies/resections *Lung* Incidental findings *Prostate* Compliance with biopsy
4. Treatment	13. Compliance with treatment *Prostate* Active surveillance
5. Harms	14. Complications Screening Test 15. Complications Further Assessment
6. Opportunistic Testing	16. Opportunistic testing
7. Impact Indicators	17. Cause-Specific Mortality 18. Crude Incidence Rate

ECIS platform – cancer screening data



Landscape survey data by country/region
In progress

Key Performance Indicators by country/region
Draft visualisation project presented in the coming slides

Main goals

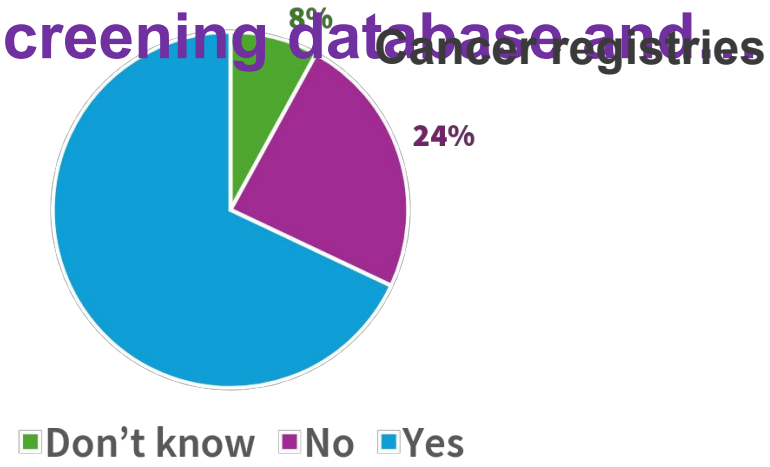
To empower programs to evaluate their own performance on a continuous basis

To improve quality of cancer screening programs

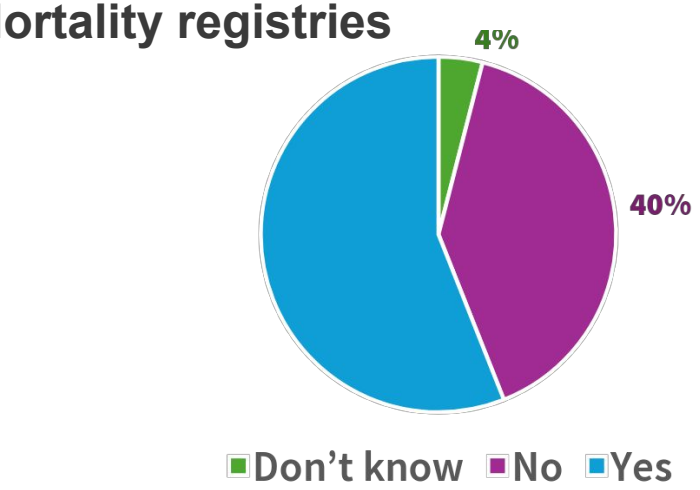
Legal framework

Individual level record linkage of screening database and

Cancer registries

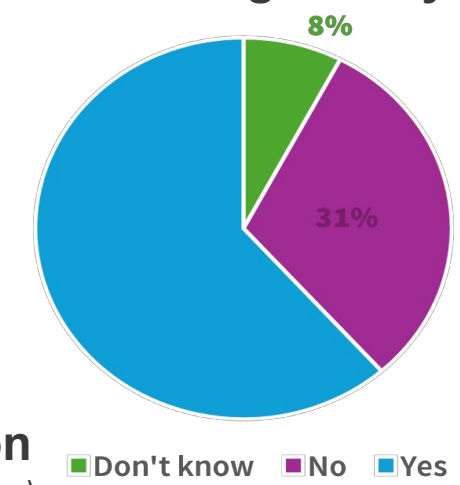


Mortality registries



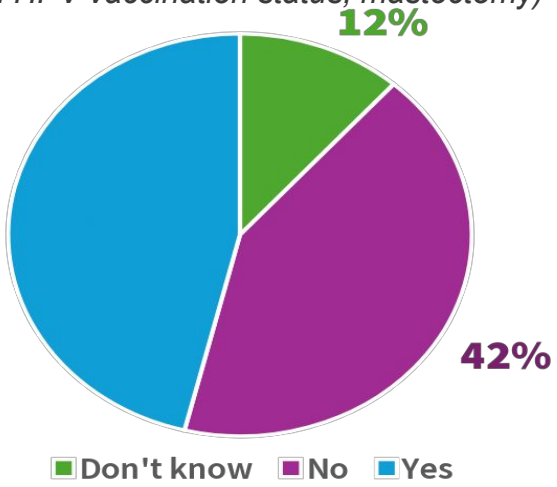
PERSONAL INVITATION OF INDIVIDUALS based

Screening history



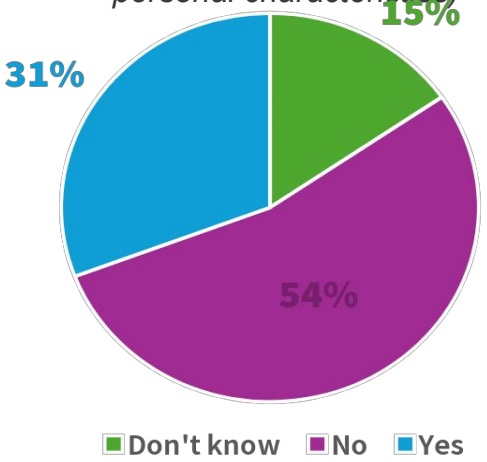
Other medical information

(e.g. HPV vaccination status, mastectomy)



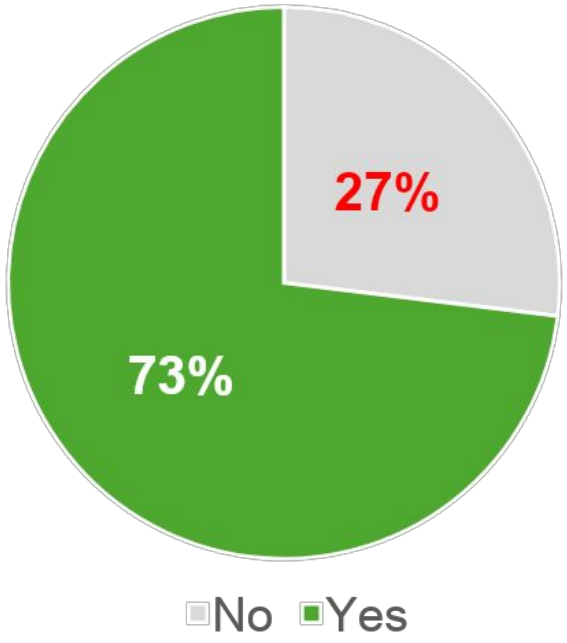
Risk stratification

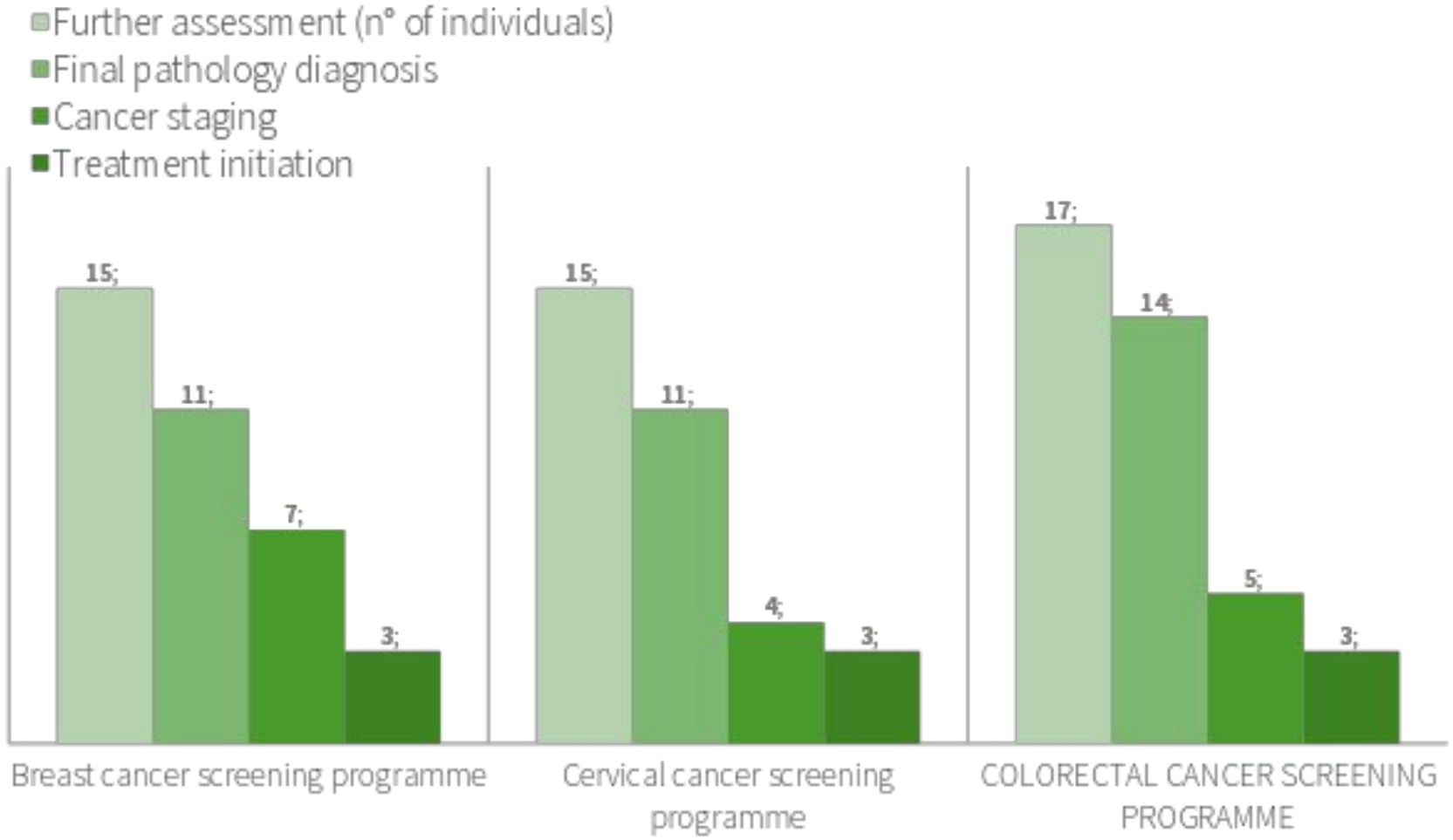
(e.g. based on screening history or personal characteristics)



MONITORING

Does the registry contain information on the **FURTHER ASSESSMENT**, **FINAL PATHOLOGY DIAGNOSIS**, **CANCER STAGING**, and **TREATMENT INITIATION**?





WP5 : Synergies – collaboration

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Validating

- Data collection templates
- Users' guides

Providing support for quantitative data collection

For the third EUSR

WP5 : Synergies – collaboration

Limitations of quantitative data collection using aggregated data

Cross sectional

Usually presenting data for a single year of activity

Comparison of outcomes across programs using different protocols is not reliable

- Outcomes are not comparable without considering commensurable intervals
- Actual screening histories of eligible population may not be captured:
  individuals may not strictly respect established screening schedule;
  different screening tests may co-exist

What is WP5 doing?

- Piloting analysis of individual-level screening data to derive ECIS KPIs
- Define format of data to be used for the analyses with suggested vocabulary for recording different variables
  - One big challenge is conversion of existing data to a standard format
- Align the work on data format to existing more advanced data models (OMOP CDM)

WP5 : Synergies – collaboration

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CancerWatch

T6.4 focuses on creating a blueprint for **data linking**, including a roadmap and technical guidelines for integrating PBCR data with other health sources (like screening data). This includes pilots using the **OMOP Common Data Model** to achieve interoperability.

Changing screening paradigm?

Individual level

using the most recent data available to

- **Update records and screening status**
- **Update risk scores and disability predictions.**

Data Resources



- Relevant data extend beyond healthcare to include environmental, lifestyle and diagnostic data



Risk score update

Offering tailored screening protocols for different risk groups

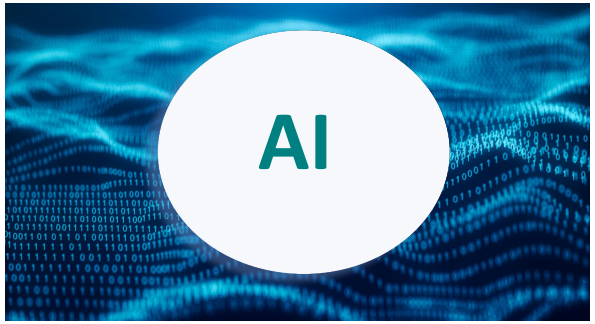
Changing screening paradigm?

Population level

Same data organized into population databases

To **support monitoring, screening evaluation, and research**

Adjustment of operating systems and screening flows



Updating the design of information systems

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EUnetCCC
ONEFORALL
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PROPHET
a PeRsOnalized Prevention roadmap for the future HEalThcare

EU JOINT ACTION
JANE2
NETWORKS OF EXPERTISE ON CANCER

NETWORK OF EXPERTISE ON CANCER
PERSONALISED PRIMARY AND SECONDARY CANCER PREVENTION

Challenges in data management

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Data availability

- **Availability of health information systems/ databases** that may collect risk factors or conditions that influence cancer risk
- **Challenges regarding linkage across different databases** and access to genetic information, medical history and lifestyle factors
- **Availability of PRS information** and testing for the whole population
- **Data quality and validation** of risk-related information

Biobanks



- **Informed consent to sample storage** and additional research activity
- **Validation of biomarkers** in personalized screening
- **Addressing inequities among member states** due to high operational costs and different regulatory systems
- Policies to **govern how biobank samples and data are shared**
- **Ensuring linkage** between **screening information** system and **biobank data**

Thank you

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