

Breast Cancer Screening Programme DORA



TYPE
STATUS

Fully implemented programme

LAST
UPDATE

September 2021

SLOVENIA • NATIONAL
Breast Cancer Screening

PROBLEM & OBJECTIVE

PROBLEM To decrease breast cancer mortality among target population in Slovenia for 25 – 30 %.

OBJECTIVE Breast cancer is the leading cancer site in women in Slovenia and is a major public health problem. More than 1,300 women (125/100,000) are newly diagnosed with this disease yearly and the incidence is constantly increasing. Each year around 400 women die from breast cancer.

Opportunistic screening did not significantly improve earlier detection of breast cancer.

The EU Council recommendation of 2003 to implement a breast screening program was one of the major initiative to start the organization of the screening programme in Slovenia.

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KEY COMPONENTS / STEPS

The organized population-based breast cancer screening program DORA has taken a comprehensive approach to quality assurance as recommended by the European guidelines for quality assurance in breast cancer screening and diagnosis (4th edition), including centralized assessment, training and supervision of all personnel, and proactive monitoring of the performance indicators of the programme since its beginning. Continued monitoring of programme performance is key to assuring the quality of the nationwide programme. The screening programme in Slovenia operates strictly in line with the DORA programme guidelines, where all the steps of the management, organization and implementation of the screening programme are defined in detailed.

- 2003–2007: Preparation for the implementation of a population-based early breast cancer detection programme at the Institute of Oncology Ljubljana. Responsible bodies: Ministry of Health, Health Insurance Institute of Slovenia (financer), Institute of Oncology Ljubljana (central management, Expert Council).
- 2008: Beginning of organized screening for the women in the central region (Ljubljana) at the Institute of Oncology Ljubljana.
- 2008: Formation of the Screening and diagnostic centre for breast cancer screening programme at Institute of Oncology Ljubljana.
- January 2010: Central IT system named DORA application for breast cancer screening programme is developed and implemented. DORA application consists of four modules: DORA screening registry, Screening, Diagnosis and Assessment. The screening registry is updated daily with Slovenian Central Population Registry, Register of Spatial Units of Slovenia and Slovenian Cancer Registry.
- 2010–2017: Additional regions join the organized screening programme with the inclusion of new screening centres.
- 2018: Nationwide coverage of organized screening.
- 2019: Second Screening and diagnostic centre for breast cancer screening programme at University Clinic in Maribor is implemented for the East part of Slovenia.
- Future planned steps:
 - Renewal of the IT system for the screening programme.
 - In-depth analysis of expansion of screening / age-groups; personalized screening; tomography screening using artificial intelligence.

KEY CONTEXTUAL FACTORS

Screening policy in Slovenia:

- Digital mammography (two projections) with 2-year screening interval in women 50–69 years;
- Double reading by experienced radiologists, when inconclusive or suspicious by both readers – consensus with two readers and a lead radiologist;
- Central education and quality control of all staff involved in the screening process;
- Two screening and diagnostic centres for breast cancer screening programme.

Screening providers in Slovenia:

- 13 Health Care providers (primary health care centres or regional hospitals) + 3 additional locations in health care facilities operated by Institute of Oncology Ljubljana + 3 mobile units operated by Institute of Oncology Ljubljana.

MAIN IMPACTS / ADDED VALUE

Results of Programme DORA:

- Number of women invited: approximately 140.000 annually.
- Number of women who participate: approximately 100.000 annually.
- Cases of breast cancer detected: approximately 600 annually .
- Participation rate 2008–2020: 74.0 % (2019: 76.8%).
- Recall rate (2018): first screening round 4.2%; further rounds 1.5 %.
- Proportion of invasive screen-detected cancers that are smaller than 10mm in diameter (2018): first screening round 31.5 %; further rounds 38.2%.

The screening programme is centrally operated and follows European quality assurance guidelines. All women aged 50–69 receive a letter with pre-fixed appointment from the central Registry DORA to attend screening mammography at planned intervals in the nearest screening centre. The screening tests are available without referral, waiting time or any additional cost. A call centre operates every day, to provide adjustments to the indicated dates and location for invited women. DORA programme uses a kind and transparent mode of communication towards all invited women (280.000 in Slovenia) through all communication channels (web page, media coverage, invitation and presentation leaflet).

Personnel are specifically trained in mammography screening. All screening units are equipped with modern systems that are under constant quality control. Mammographies are independently read by two experienced radiologists, and when consensus needed, a third radiologist, too. The screening programme provides quick diagnosis and further treatment. All screening procedures are documented in a central operating information system (DORA application) and PACS that enables monitoring of screening performance and results.

LESSONS LEARNED

- Central operation of the screening programme is key: education of the staff, quality control, invitations to all women for screening mammography, central IT system for monitoring, two screening and diagnostic centres that provide diagnostic procedures and further treatment.
- It is practical to have all mammographies from all modalities sent to central PACS at the Institute of Oncology, Ljubljana.
- Multidisciplinary collaborative approach is important: radiologists, radiographers, pathologists, surgeons, epidemiologists, IT staff, data analysts, administrative staff, public relations, etc.
- Legal regulations for performance of screening, data gathering and personal data protection is necessary for success of programme.

REFERENCES & DOCUMENTATION

- [Basic data of DORA \(in English\)](#)
- [DORA programme guidelines \(in Slovene\)](#)
- [Annual programme report \(in Slovene\)](#)
- [Information for women \(in Slovene\)](#)

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