



WEO

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endoscopy

Roadmap for improvement of the implementation of the screening in Montenegro

On behalf of IPH team,

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Agenda

- Designing a roadmap for improvement of the implementation a population-based program for screening in Montenegro



Montenegro - Wild Beauty

- Located in the continent of Europe, Montenegro covers 13,812 square kilometers.
- 633 158 inhabitants
- Montenegro became the first ecological state globally (20.09.1991)
- Five national parks
- Six nature parks
- 20% of protected territory (UNESCO, Ramsar sites...)



Introduction

- **Orgnised** colorectal cancer screening programme implemented on June 1st 2013- pilot project
- On June 1st 2014 it became **national** screening programme
- Target age group **50 to 74** years
- Invitation by phone
- Screening test- FIT (cut off value: 99 ng/ml)



Introduction

- Multidisciplinary working groups
- Algorithm of screening programme
- Positive FIT result → colonoscopy → polypectomy/biopsy → PH
- Screening interval- 2 years



Monitoring results

CRC screening	Age group	Target population	Invited		Responded		Tested (FIT)			Positive iFOBT		Colonoscopy performed	
		N	N	%	N	% of invited	N	% of invited	% of target population	N	%	N	%
I year	60-64	21720	19975	91.97	14170	70.94	8490	42.50	39.09	846	9.96	641	75.77
II year	59-64	31363	25758	82.13	18754	72.81	8806	34.19	28.08	851	9.66	576	67.69
III year	57-66	30183	24538	81.30	20061	81.75	11959	48.74	39.62	928	7.76	620	66.81
IV year	54-67	38778	30193	77.86	23479	77.76	12754	42.24	32.89	938	7.35	634	67.59
V year	50-68	47386	35902	75.76	28959	80.66	15763	43.91	33.27	1165	7.39	818	70.21
VI year	50-74	47727	32067	67.19	26191	81.68	13632	42.51	28.56	1407	10.32	771	54.80
Total		217157	168433	77.56	131614	78.14	71404	42.39	32.88	6135	8.59	4060	66.18

Table 1. Result of monitoring organised colorectal cancer screening programme in Montenegro 2013- 2019.



WP1 Project management 1 - ERASMUS MC

WP2 Evaluation 1 - ERASMUS MC

WP3 Road maps to improve cancer screening 2 - SYREON

WP4 Monitoring 3 - AOU

WP5 Implementation of breast cancer screening 4 - GSCO

WP6 Implementation of cervical cancer screening 5 - IOCN

WP7 Implementation of colorectal cancer screening 6 - IPH MNE

WP8 Capacity building 1 - ERASMUS MC

WP9 Ethics requirements 1 - ERASMUS MC



'This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [965014]'.



WP7: Objectives

- ***To improve the implemented national colorectal cancer (CRC) screening programme in Montenegro.***
- 7.1: Align the process of implementation of the colorectal cancer screening programme in Montenegro with European standards and best practices
- 7.2: Improve the access to the national CRC screening programme in Montenegro
- 7.3: Increase the capacity of regional GPs and medical staff (gastroenterologists) on the CRC screening programme
- 7.4: Raise awareness on the importance of the CRC screening programme.
- 7.5: Evaluate the implementation study



Deliverables:

- 7.1 National Guidelines & Protocols developed and submitted to the Ministry of Health of Montenegro for the approval
- 7.2 Information materials distributed
- 7.3 New regional colonoscopy centre established
- 7.4 IT system improved
- 7.5 Trainings organized
- 7.6 Report of implementation (Month 60)



- National Guidelines & Protocols developed and submitted to the Ministry of Health of Montenegro for the approval ✓
- Information materials distributed ✓

 **EU-TOPIA-east**
towards improved cancer screening
INSTITUT ZA JAVNO ZDRAVLJE CRNE GORE
Centar za kontrolu i prevenciju nezaraznih bolesti

**SMJERNICE SPROVOĐENJA NACIONALNOG
ORGANIZOVANOG SKRINING PROGRAMA RANOG
OTKRIVANJA RAKA DEBELOG CRIJEVA U CRNOJ GORI**

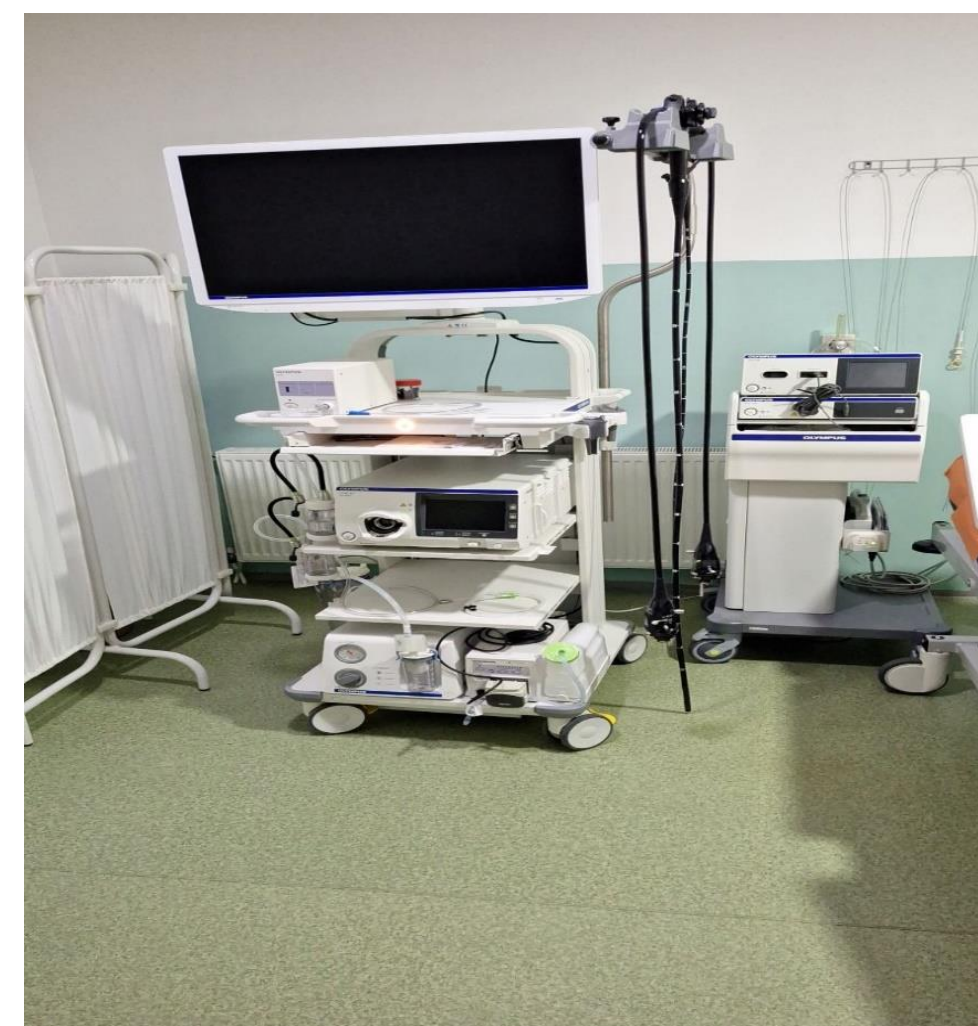
Podgorica, oktobar 2023. godine



New regional colonoscopy center established

Assessment of equipment and personnel

- The working group made the decision that the new colonoscopy center should be in the GH Bijelo Polje- in northern part of Montenegro
- Equipment specification
- Tender announcement
- Procurement and installation of equipment
- Opening of a new colonoscopy center
- Starting screening colonoscopies



IT-system improved

- The information system (IS) of the screening program was established within the existing system of the Health Insurance Fund of Montenegro
- Includes data on insured individuals
- Each step within the screening program algorithm is recorded in the information system and used for monitoring and evaluation purposes
- Data can be collected by:
 - ✓ gender
 - ✓ age groups
 - ✓ healthcare facility
 - ✓ screening provider
 - ✓ period
 - ✓ with the possibility of displaying individual screening history in the test results section.



Trainings for colorectal cancer screening

- GPs
- Medical staff of GH Bijelo Polje
- General population



Training module for operators of the organized colon cancer screening program in Montenegro

Topics of the training

- Epidemiological situation of colon cancer/National organized screening program for early detection of colon cancer in Montenegro
- National organized screening program for the early detection of colon cancer in Montenegro - the role of the chosen doctor for adults
- The importance of timely diagnosis of colon cancer - colonoscopy as the gold standard
- Pathophysiological and molecular diagnosis of patients with colon cancer
- New approaches in the treatment of colon cancer.



Seminar on triage and preparation participants for colonoscopy for the primary health care doctors:

- Emphasized the critical role of adequate patient triage and preparation by general practitioners in ensuring successful colonoscopy outcomes
- Presented the guidelines of the European Society of Gastroenterology to standardize practice (Boston Bowel Preparation Scale)
- Identified common procedural challenges encountered during colonoscopies, stressing the need for optimal preparation to minimize complications



Promotion of screening among the general population

- A seminar on colorectal cancer screening was held at a nursing home for the elderly in Podgorica, focusing on raising awareness about the importance of early detection and the benefits of timely intervention for cancer prevention.
- A similar seminar was conducted for the Association of Pensioners of Montenegro, addressing screening protocols, eligibility criteria, and the role of early diagnosis in reducing colorectal cancer risks among older adults.



CRC screening Montenegro 2018

Maximization of uptake

Inadequate public promotion of screening

- ✓ Develop tailored communication strategies

Quality indicators

Participation rate

48% in 2018

Retention rate

70% in 2018

Operation of the program

Positivity rate

10.8% in 2018

Inadequate rate

3.8% in 2018

CRC DR

0.03% in 2018

Advanced adenoma DR

0.09% in 2018

Maximization of follow-up

Lack of colonoscopy capacity in the northern part of the country

- ✓ comprehensive capacity planning for gastroenterologists, other medical and non-medical staff
- ✓ assessing the available current training and educational programs and to identify gaps in these to meet with the optimal capacity

Quality indicators

Compliance with referral to assessment

57% in 2018



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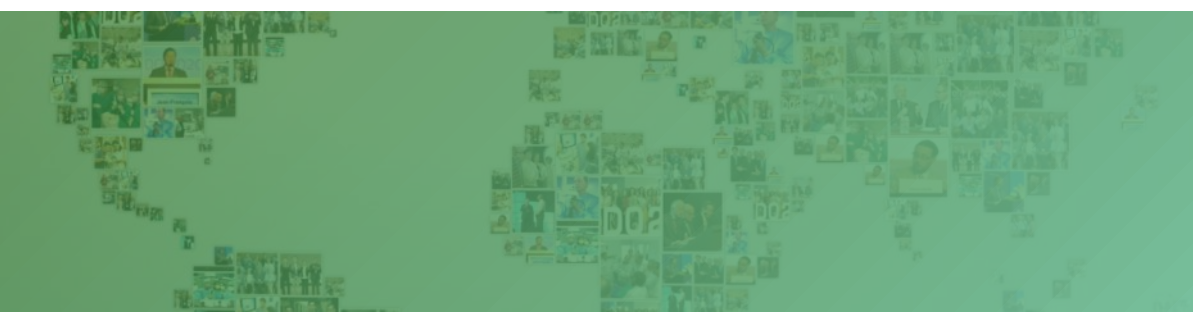


CRC screening Montenegro 2018-2023

		2018	2023
Population targeted for invitation (% of estimated Monstat)		25,7%	85,8%
Invitation coverage		NA	20,5%
Participation	Overall	47,8%	51,2%
	First invitation	39,8%	44,4%
	Subsequent invitation	69,9%	74,8%
Positivity rate	Initial	12,3%	7,6%
	Subsequent	8,5%	5,8%
Inadequate rate	Initial	4,5%	0,8%
	Subsequent	2,6%	0,4%
TC performed		56,6%	76,2%
TC Completed		90,1%	91,4%
PPV FIT+	CRC	0,47%	1,81%
	Adenomas	5,9%	13,3%
DR	CRC	0,03%	0,10%
	Adenomas	0,3%	0,7%

Table 2. Comparative analysis of operational indicators of the program for the years 2018 and 2023.

**With gratitude to colleagues from the Epidemiology and Screening Unit – CPO - University Hospital Città della Salute e della Scienza-dr Carlo Senore and dr Gianluigi Ferrante*





Invitation coverage-participation-retention rate ECIS-Canscreen survey

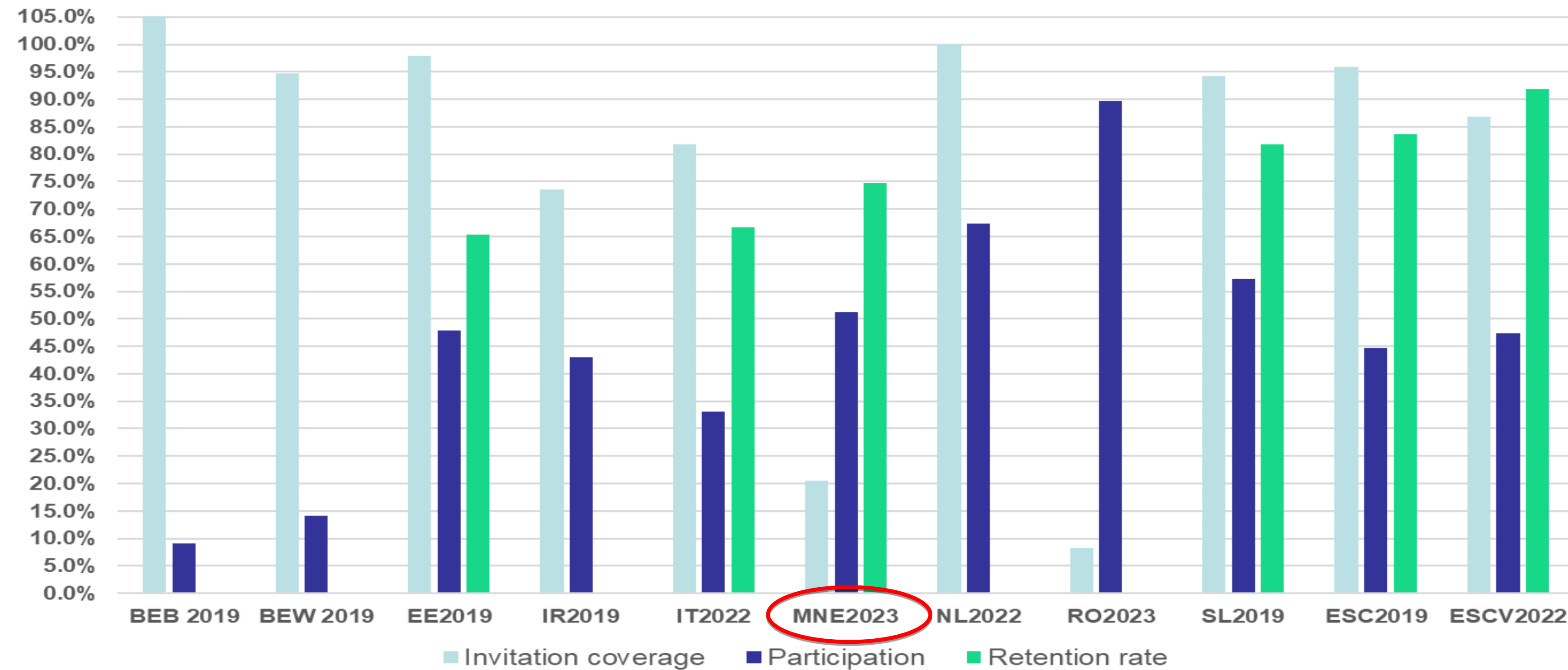


Figure 1. Comparative analysis of Invitation coverage, participation and retention rate of the organized screening program in 2023.

**With gratitude to colleagues from the Epidemiology and Screening Unit – CPO - University Hospital Città della Salute e della Scienza-dr Carlo Senore and dr Gianluigi Ferrante and International Agency for Research on Cancer*





Compliance with TC referral ECIS-Canscreen survey



Figure 2. Compliance with TC referral in 2023.
*With gratitude to colleagues from the Epidemiology and Screening Unit – CPO - University Hospital Città della Salute e della Scienza-dr Carlo Senore and dr Gianluigi Ferrante and International Agency for Research on Cancer



The following challenges

- Increasing invitation coverage
- Establishing a screening registry
- Promotion of screening program
- A roadmap for these activities has been developed in collaboration with project partners from Syreon University, Hungary



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Thank you for your attention!

