Why is it necessary to update the EU Council recommendations 2003?

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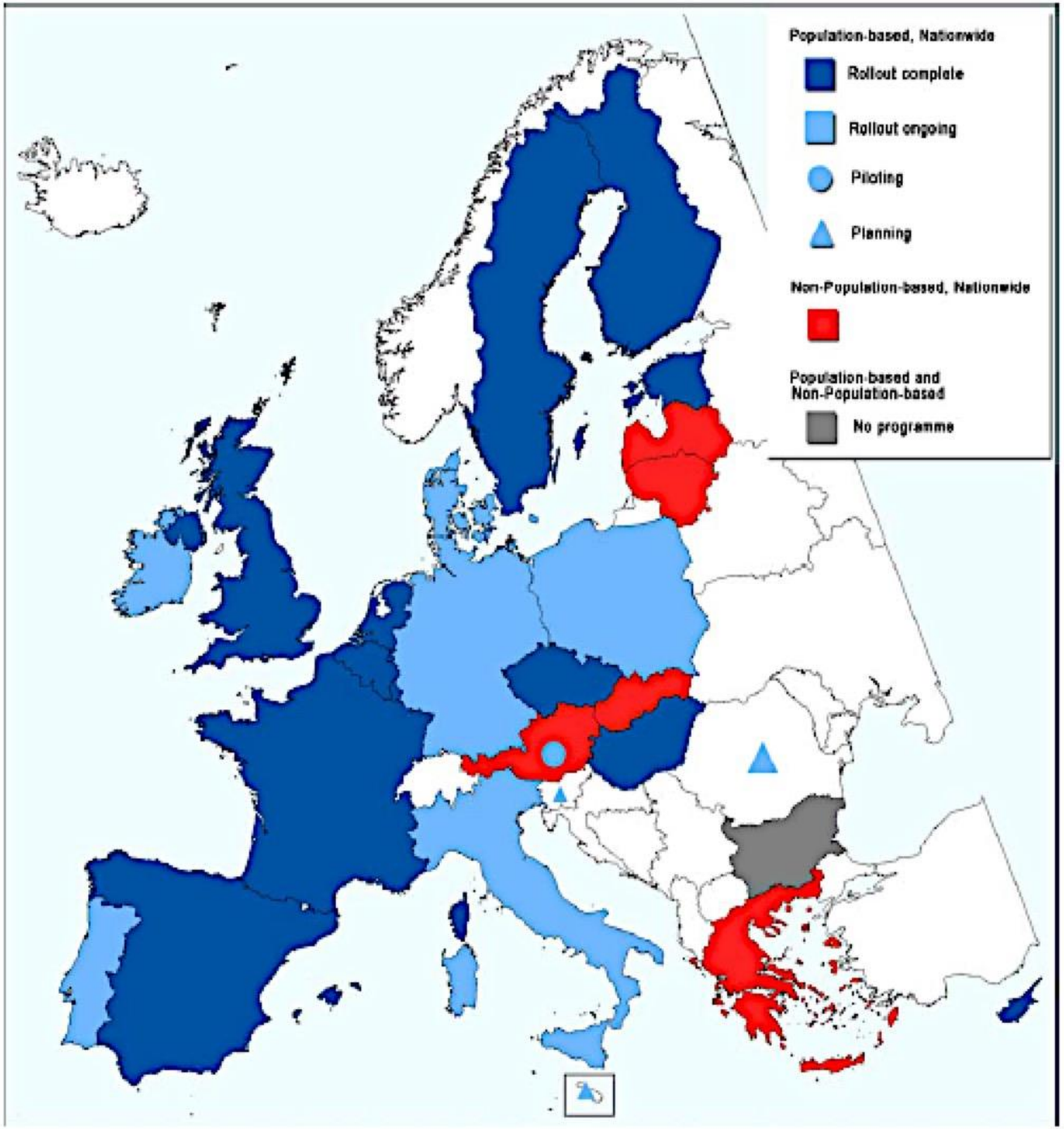
Key EU Council Recommendations on Cancer Screening – 2 Dec 2003

- Offer evidence-based screening for breast, cervical & colorectal cancer
  - Using a population based approach
  - With quality assurance at all levels
- Ensure availability of human & financial resources for appropriate organization & quality control
- Collect, manage and evaluate data related to screening tests, assessment and final diagnosis
- Regularly monitor process & outcome
- Report to the Council on the progress on a regular basis

Breast CA Screening Programs in the EU 2007

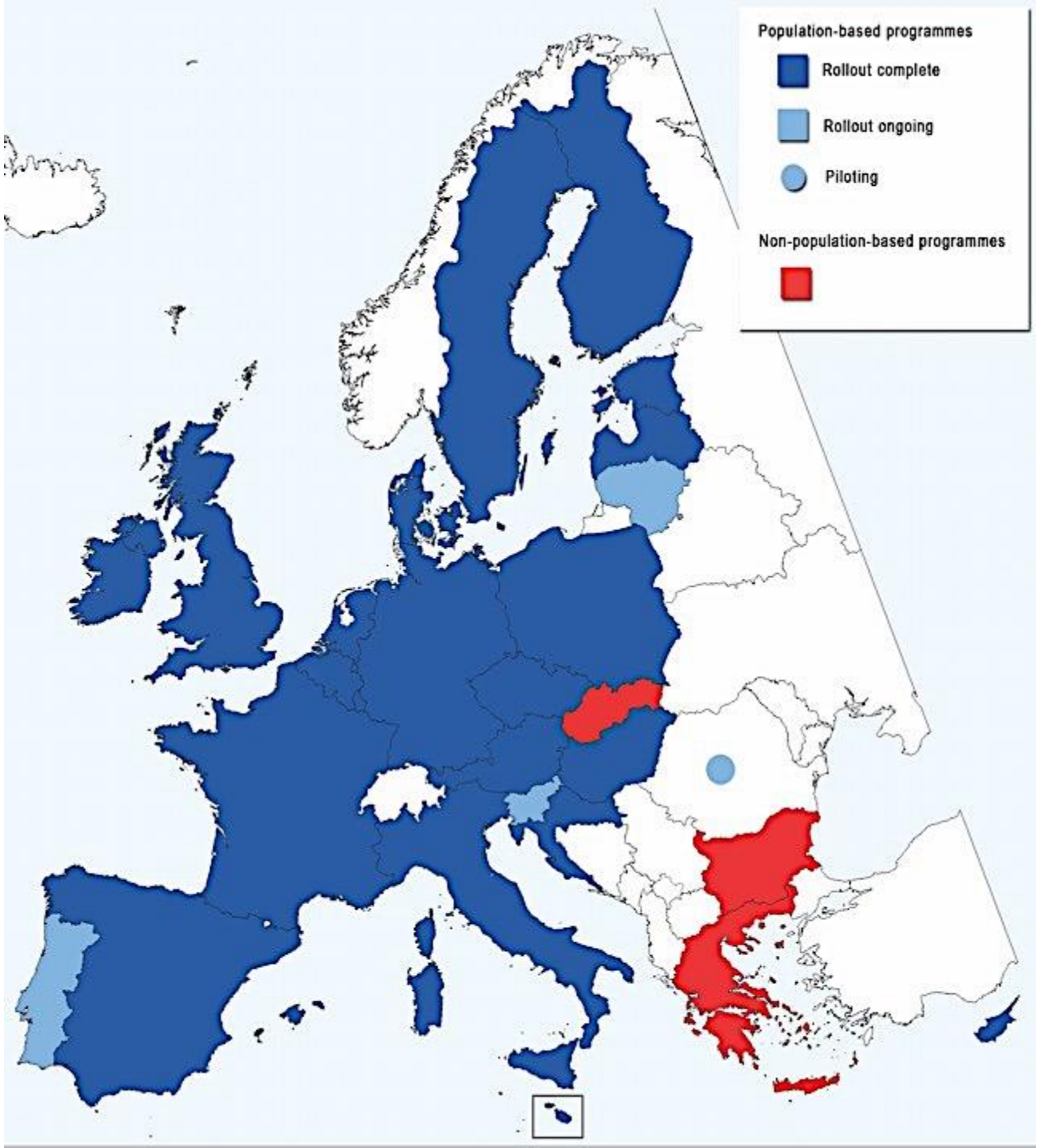


Pop-based screening in 22 MS

91% EU resident women aged 50-69 yrs had access

Roll-out complete in 11 MS

41% EU resident women aged 50-69 yrs had access



Breast CA Screening Programs in the EU 2016

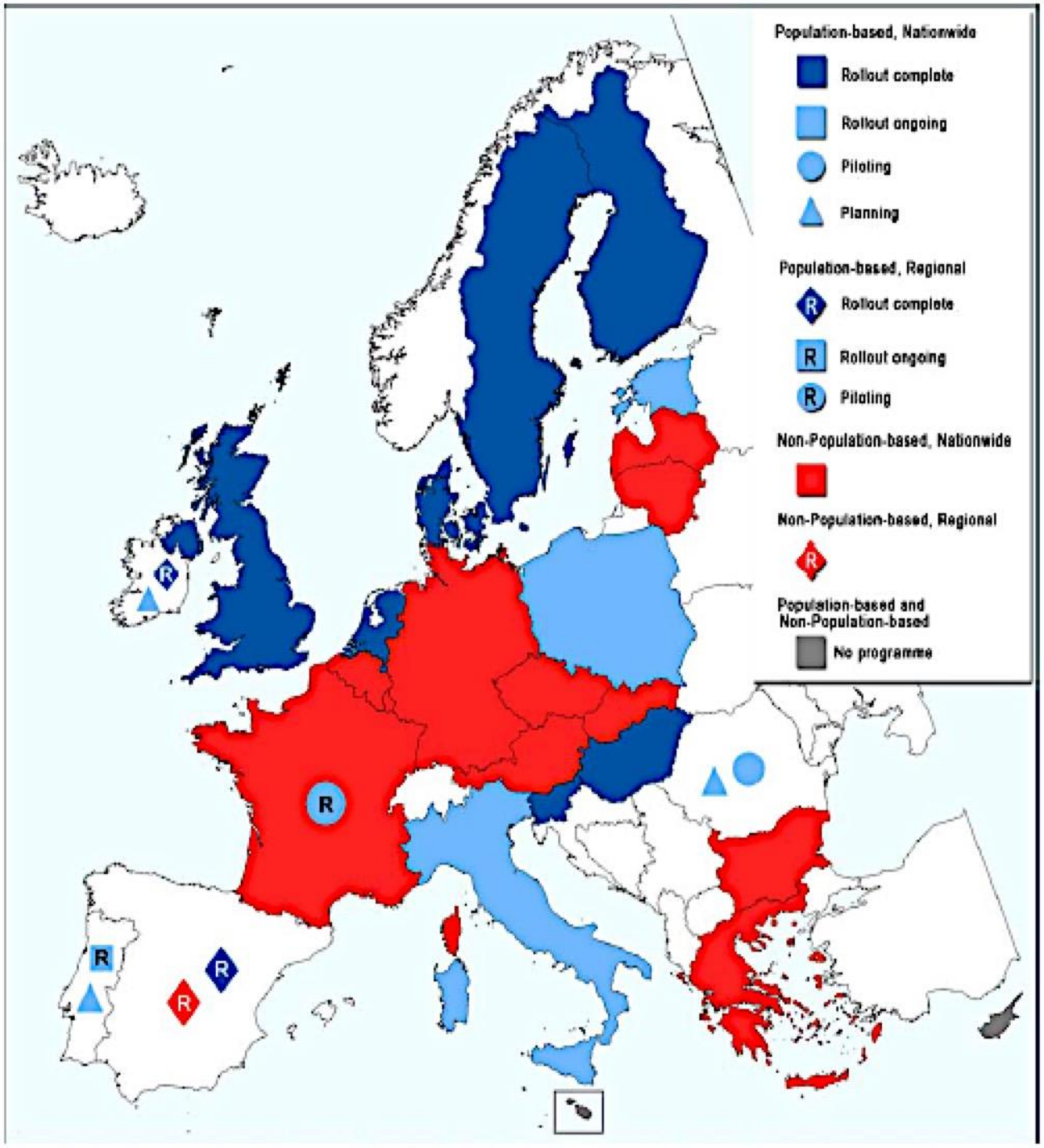
Pop-based screening in 25 MS

95% EU resident women aged 50-69 yrs had access

Roll-out complete in 21 MS

88% EU resident women aged 50-69 yrs had access

Cervical Cancer Screening Programs in the EU 2007

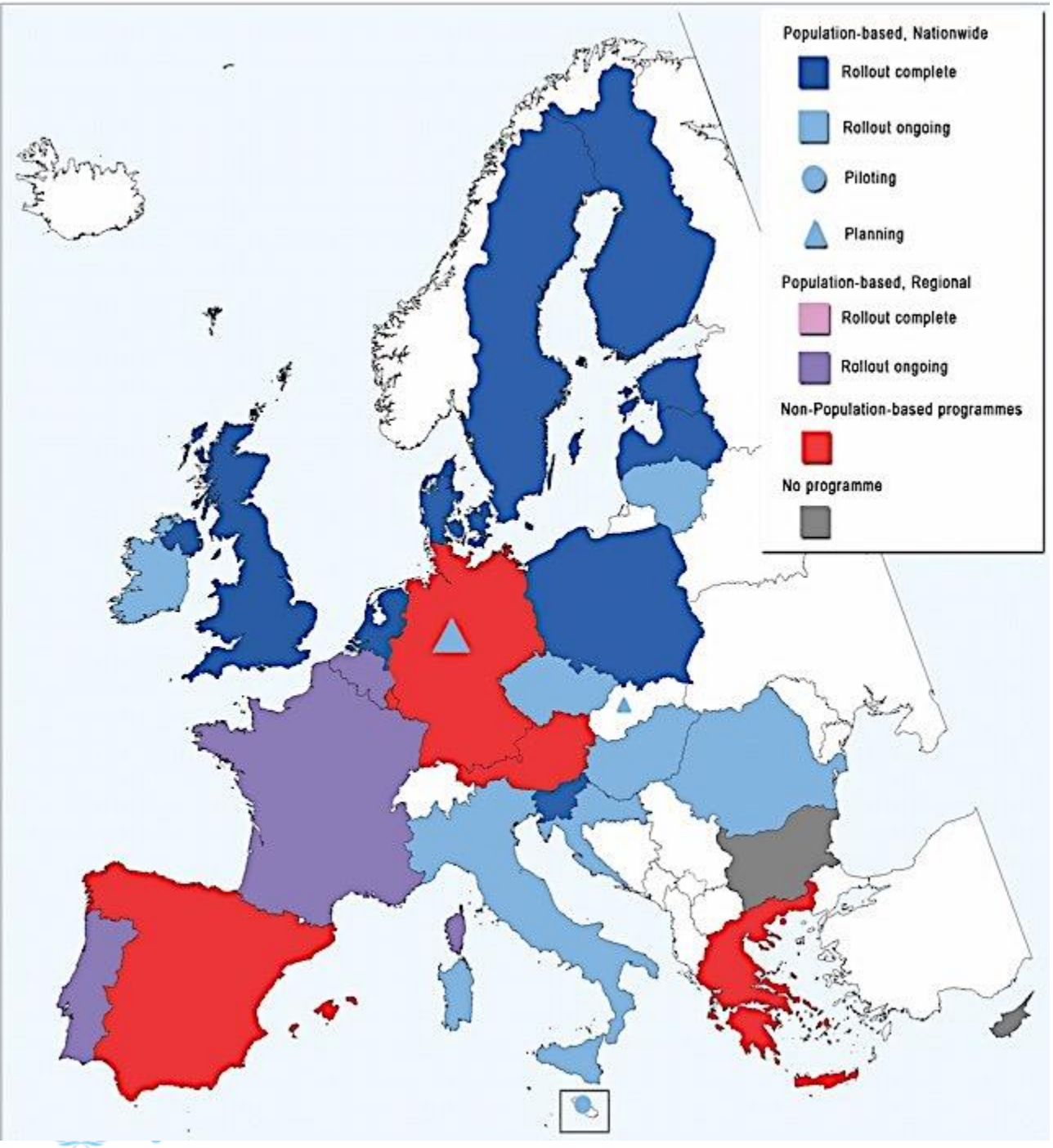


Pop-based screening in 17 MS

51% EU resident women aged 30-59 yrs had access

Roll-out complete in 7 MS

22% EU resident women aged 30-59 yrs had access



Cervical Cancer Screening Programs in the EU 2016

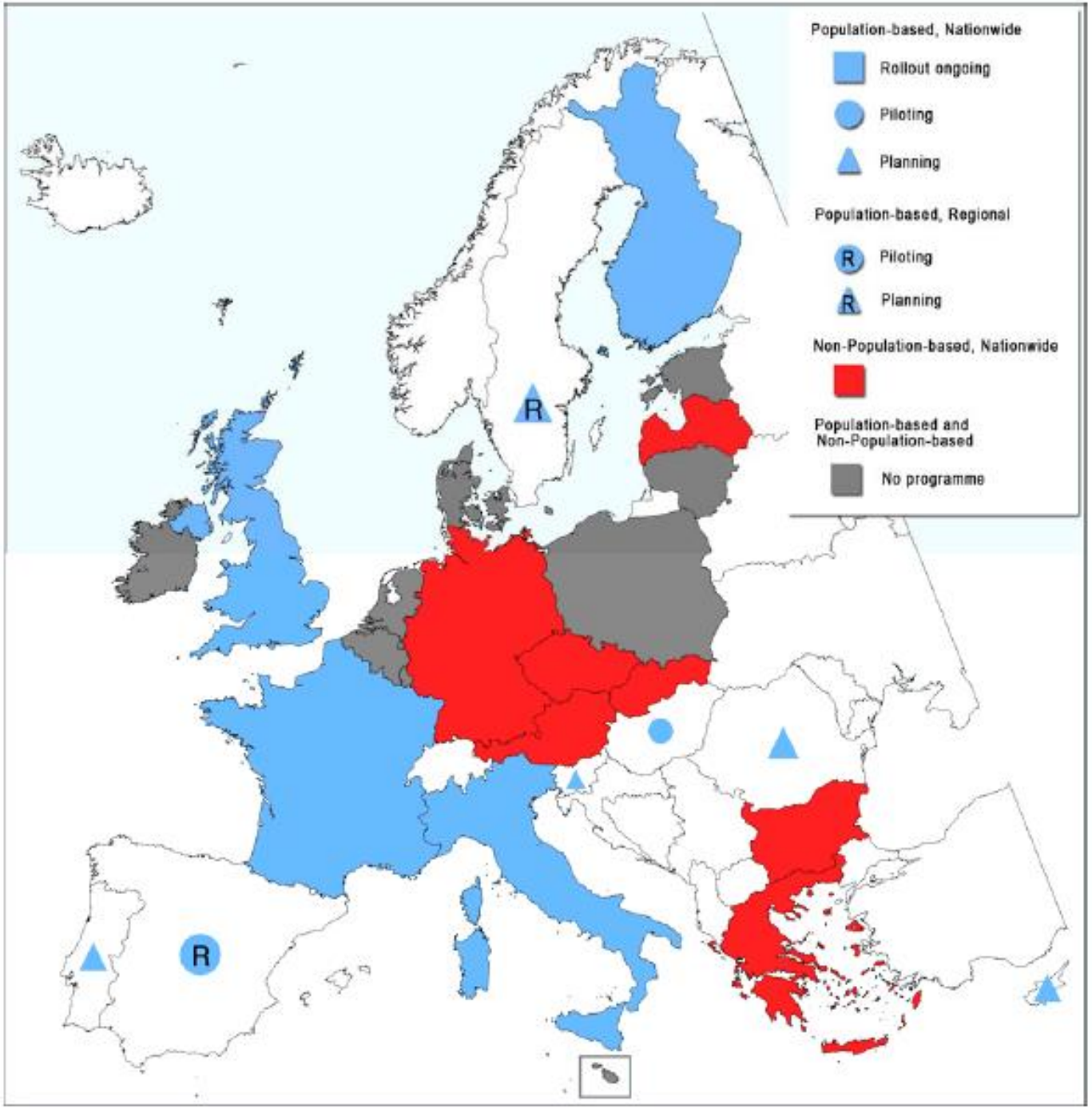
Pop-based screening in 22 MS

72% EU resident women aged 30-59 yrs had access

Roll-out complete in 9 MS

28% EU resident women aged 30-59 yrs had access

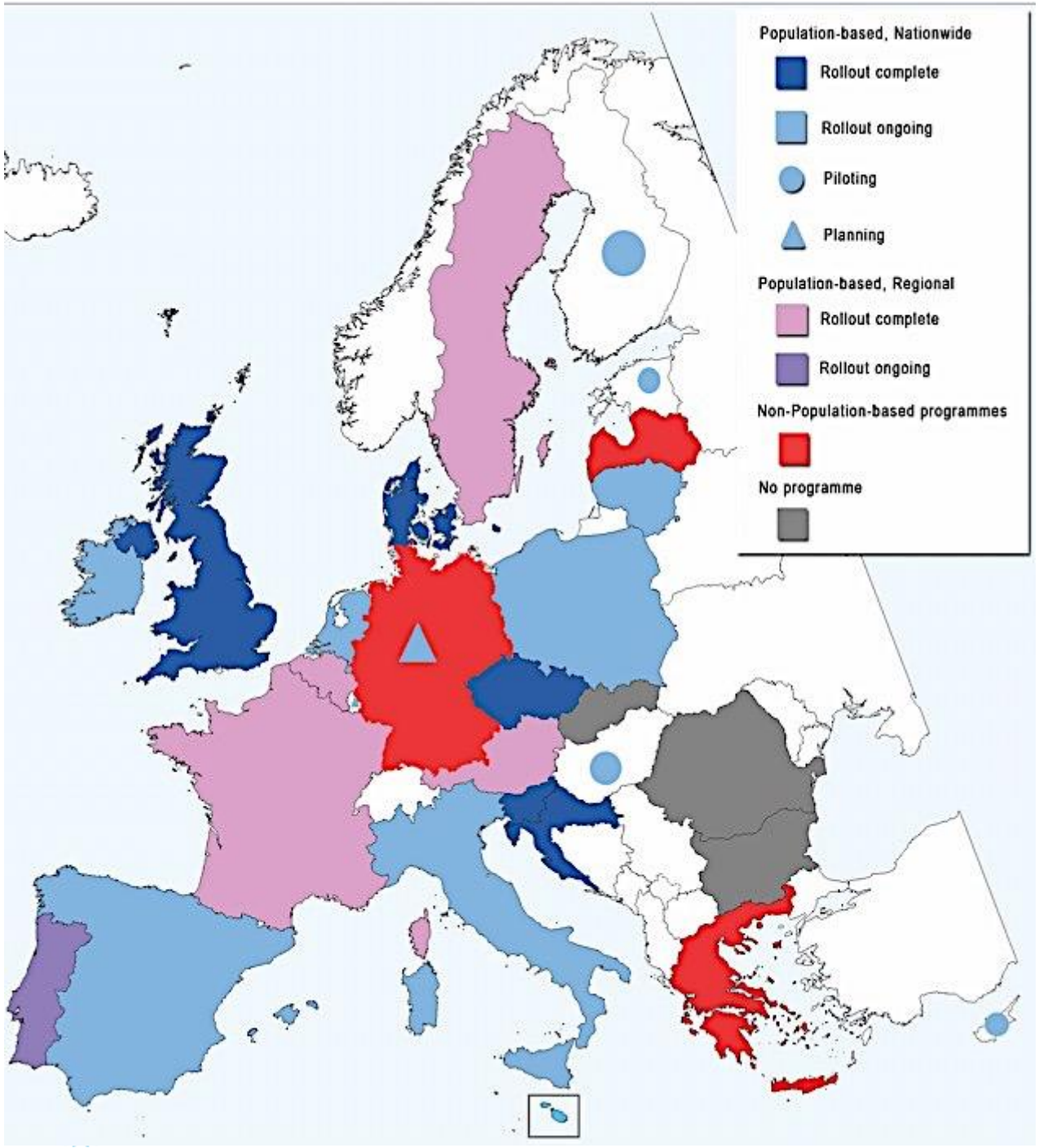
Colorectal CA Screening Programs in the EU 2007



Pop-based screening in 12 MS

43% EU residents aged 50-74 yrs had access

Roll-out complete in 0 MS



Colorectal CA Screening Programs in the EU 2016

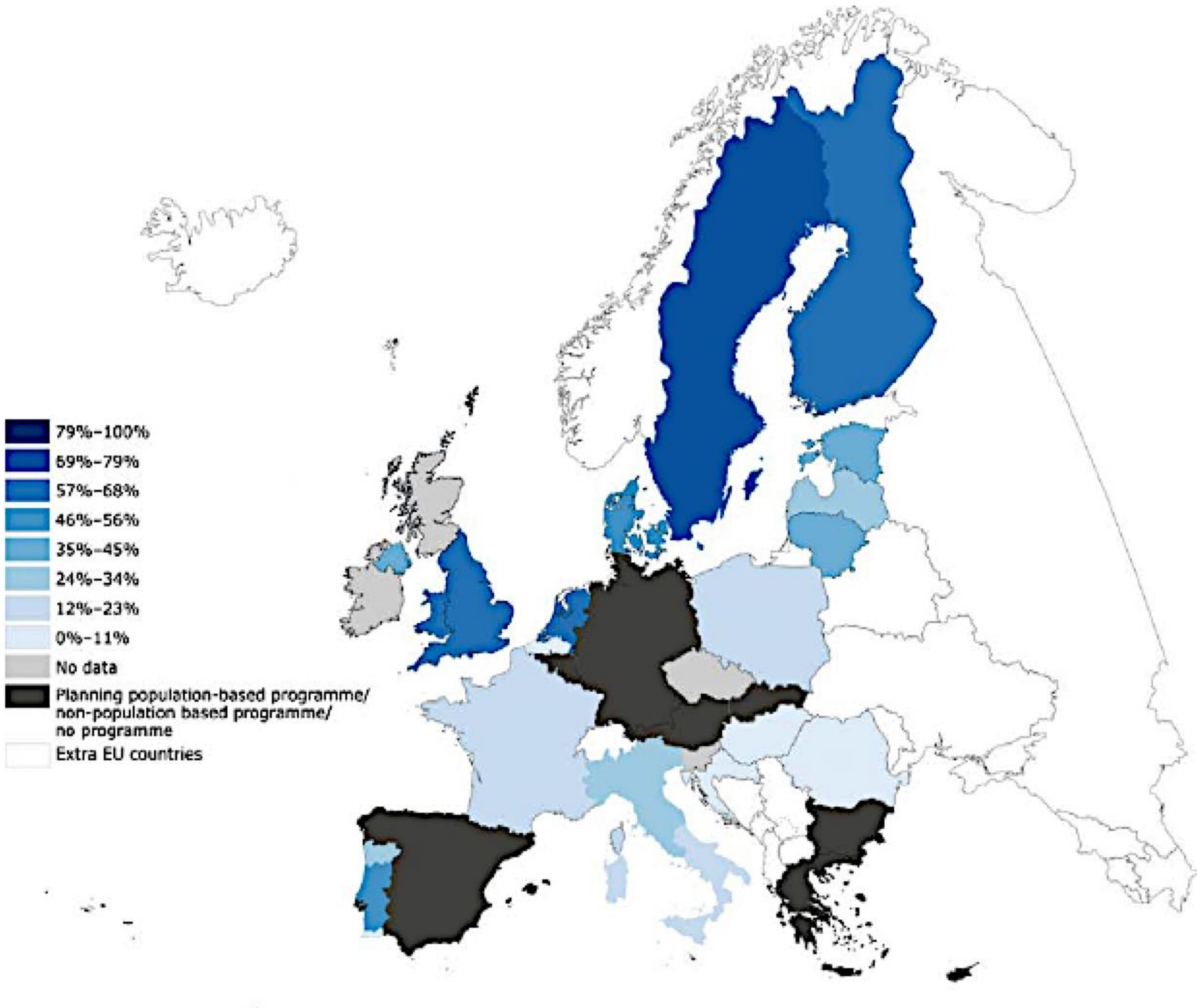
Pop-based screening in 20 MS

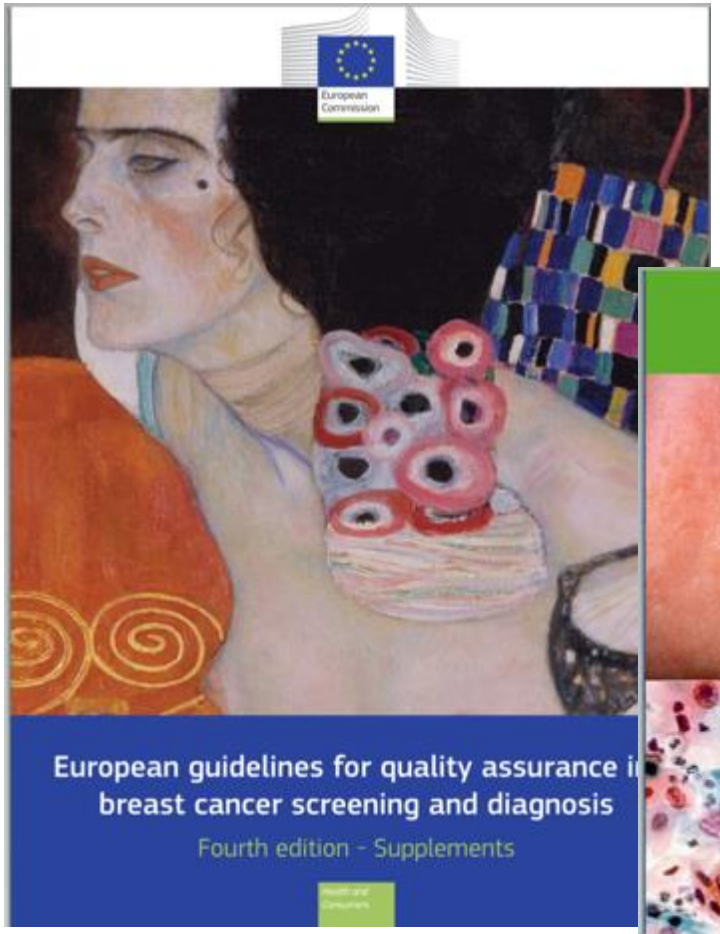
72% EU residents aged 50-69 yrs had access

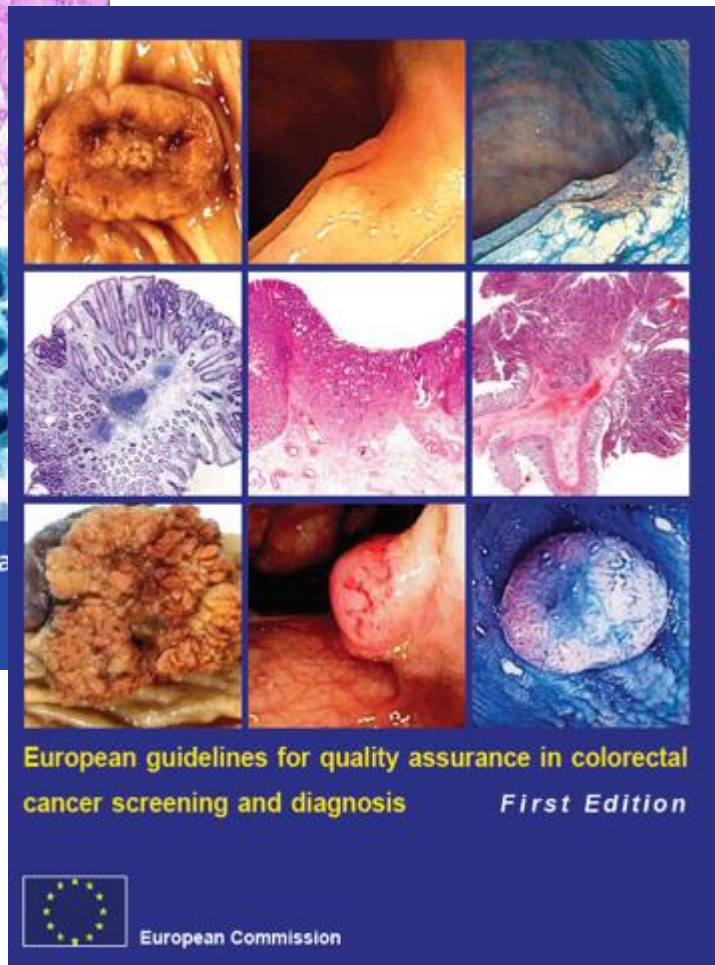
Roll-out complete in 11 MS

27% EU residents aged 50-69 yrs had access

Cervical Cancer Screening – Exam Coverage by Programme-Specific Age Range







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Breast Cancer Screening – Target Age & Interval

Country	Target Age (Years)								Screening interval
	40-44	45-49	50-54	55-59	60-64	65-69	70-74	74+	
Austria		■	■	■	■	■			2
Belgium			■	■	■	■			2
Bulgaria			■	■	■	■			NA
Croatia			■	■	■	■			2
Cyprus			■	■	■	■			2
Czech Rep		■	■	■	■	■	■	■	2
Denmark			■	■	■	■			2
Estonia			■	■	■				2
Finland			■	■	■	■			2
France			■	■	■	■	■		2
Germany			■	■	■	■			2
Hungary		■	■	■	■				2
Ireland			■	■	■	■			2
Italy		■	■	■	■	■	■		1 (45-49); 2 (50-74)
Latvia			■	■	■	■			2
Lithuania			■	■	■	■			2
Luxembourg			■	■	■	■			2
Malta			■	■	■	■			3
Netherlands			■	■	■	■	■		2
Poland			■	■	■	■			2
Portugal		■	■	■	■	■			2
Romania			■	■	■	■			NA
Slovenia			■	■	■	■			2
Spain			■	■	■	■			2
Sweden	■	■	■	■	■	■	■		1.5-2
UK			■	■	■	■			3

Eu Commission Initiative on Breast Cancer Guidelines

- *No mammography screening for asymptomatic average risk women aged 40 to 44 yr (conditional recommendation, moderate certainty in the evidence)*
- *Mammography screening for*
  - *asymptomatic average risk women aged 45 to 49 yr (every 2-3 yrs)*
  - *asymptomatic average risk women aged 70 to 74 yr (every 3 yrs)*
- *Recommends against annual mammography*

Breast Cancer Screening and Diagnosis: A synopsis of the European Breast Guidelines. Ann Intern Med. 2020; 172

Efficacy of HPV based screening – FU of European RCTs

- 176,464 women (20–64 years) were randomly assigned **to HPV** (experimental arm) or **cytology** (control arm) screening in Sweden (Swedescreen), the Netherlands (POBASCAM), England (ARTISTIC), and Italy (NTCC).
- Pooled **rate ratio** for invasive cancer:
  - all randomized: **0.60** (95%CI 0.40-0.89)
  - negative test at entry: **0.30** (95%CI 0.15-0.60)

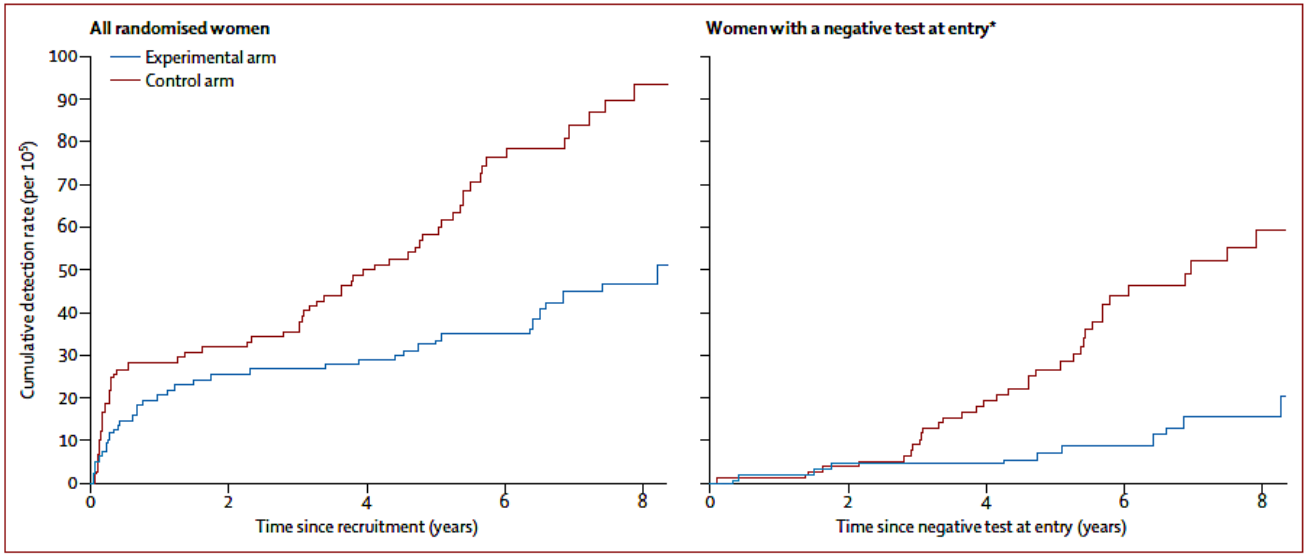

Figure 2: **Cumulative detection of invasive cervical carcinoma**
*Observations are censored 2·5 years after CIN2 or CIN3 detection, if any.

Ronco et al. Lancet 2014; 383; 524

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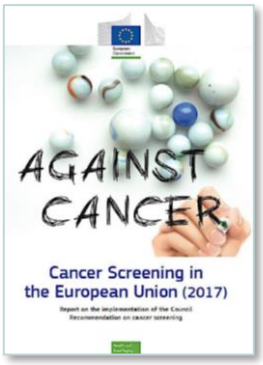
Hazard ratios of incidence of stage II+ cervical cancer and cervical cancer mortality (2000-2009)

Group	Cases	Person years of follow-up	Hazard ratio* (95% CI)
Stage II+ cervical cancer incidence			
Control	82	247,895	1.00
HPV	**39**	**268,185**	**0.47 (0.32-0.69)**
Cytology	58	250,523	0.75 (0.51-1.10)
VIA	86	267,326	1.04 (0.72-1.49)
Cervical cancer mortality			
Control	64	248,175	1.00
HPV	**34**	**268,674**	**0.52 (0.33-0.83)**
Cytology	54	251,144	0.89 (0.62-1.27)
VIA	56	267,917	0.86 (0.60-1.25)

CI: confidence interval * Age-adjusted

Sankaranarayanan et al., N Engl J Med 2009;360:1385-1394



	50-59			60-69		
	FIT	gFOBT	TC/FS	FIT	gFOBT	TC/FS
Tests	1,753,983	1,294,982	12,778	2,218,695	3,140,223	17,541
Screen positivity	5,1%	2,0%	11,5%	6,5%	2,1%	-
F.U. colonoscopy participation rate	76,8%	83,1%	82,2%	75,0%	84,5%	-
Completion rate F.U. colonoscopy	93,9%	97,8%	97,2%	93,7%	96,8%	97,1%
Detection Rate advanced adenoma	8,7‰	2,5‰	49,5‰	13,7‰	2,3‰	72,4‰
Detection Rate colorectal cancers	1,1‰	0,6‰	3,5‰	2,3‰	1,2‰	8,1‰

UK Flexible Sigmoidoscopy Screening RCT- FU at 17 years

	CRC Rate (/100,000 PY)		Hazard Ratio	P-value
	Invited to screen	Control	HR (95% CI)	
Incidence	(N=57,098)	(N=112,936)		
all sites	137	184	**0.74** (0.70 0.80)	<0.0001
distal	66	112	**0.59** (0.54-0.64)	<0.0001
proximal	68	71	**0.96** (0.87-1.06)	0.436
Mortality				
all sites	39	56	**0.70** (0.62-0.79)	<0.0001
distal	17	31	**0.54** (0.45-0.65)	<0.0001
proximal	21	23	**0.91** (0.76-1.08)	0.262

Conclusions: a **single flexible sigmoidoscopy** in lifetime provides substantial protection, with **protection lasting at least 17 years**.

Atkin; Lancet 2017 389 1299

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S2213-2600(19)30136-5

Benefits and harms in the National Lung Screening Trial: expected outcomes with a modern management protocol

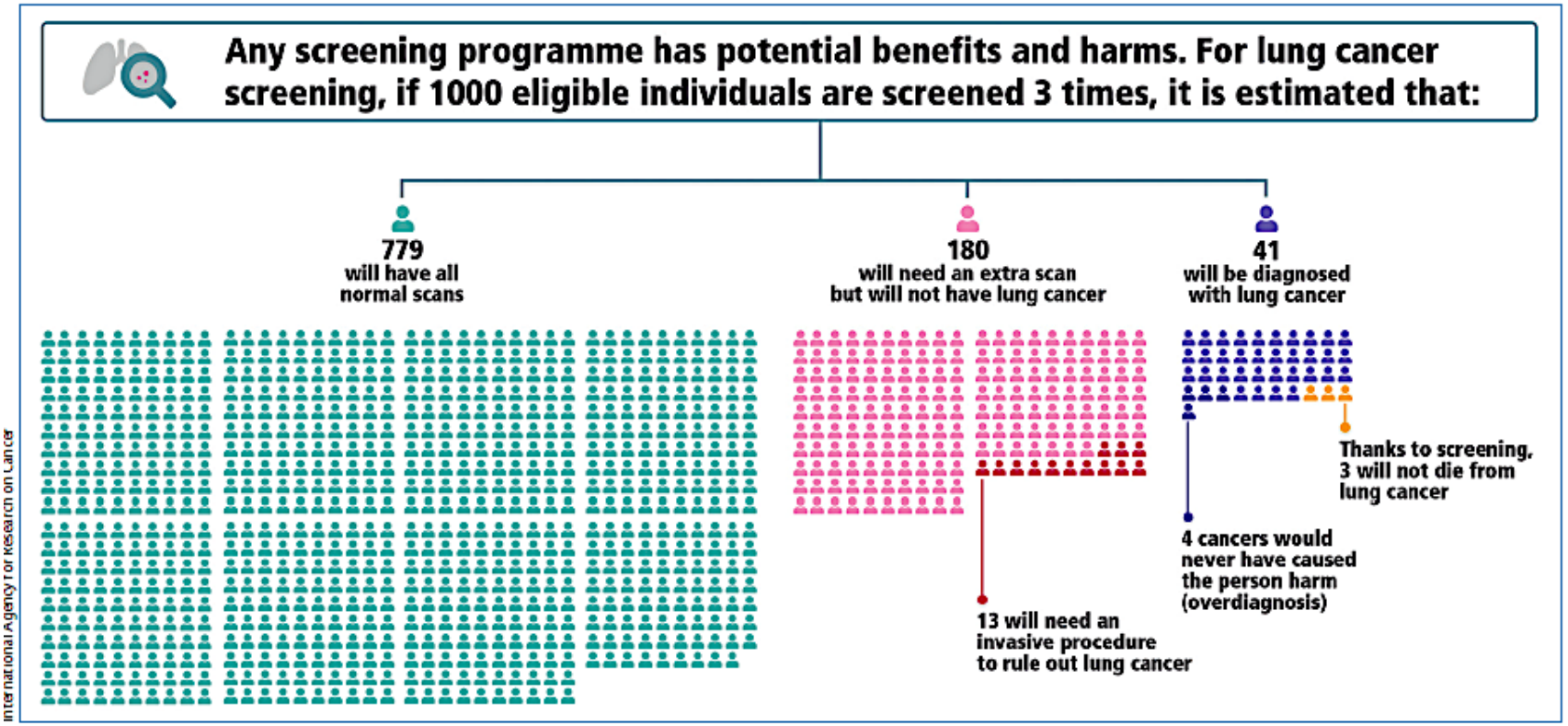

Figure: **Infographic depicting estimated outcomes in the US National Lung Screening Trial under the Lung-RADS nodule management protocol**
Reproduced with permission from the International Agency for Research on Cancer; full-page infographic available at https://www.iarc.fr/infographics/benefits-and-harms-of-lung-cancer-screening/

International Agency for Research on Cancer
World Health Organization

The Council Recommendations to be revisited to-

- Address significant heterogeneity that still exists between the MSs & the inequity within the MSs
- Review evolving evidence on benefits & harms of screening for different screening strategies and new cancer sites
- Recommend quality improvement through regular measurement of screening performance using standardized data collection tools, protocols and outputs
- Enlist minimally acceptable standards for the core indicators
- Recommend integration between primary and secondary preventive strategies through comprehensive approaches