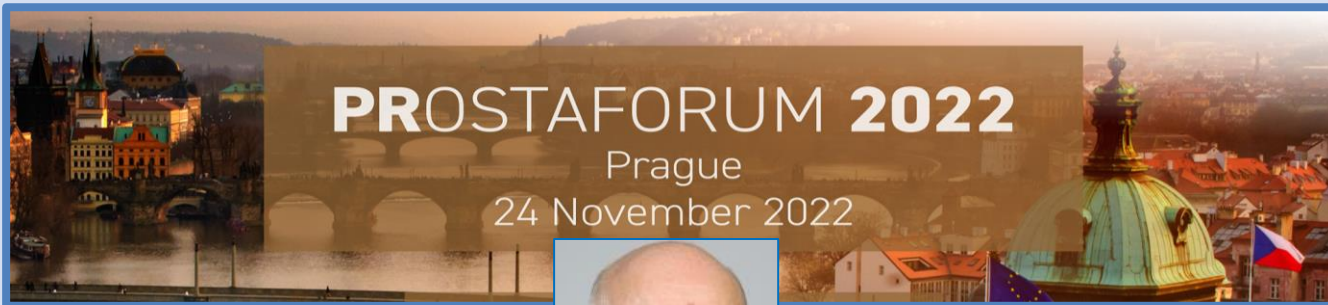


# Risk Stratified Early Detection for Prostate Cancer



MINISTERSTVO ZDRAVOTNICTVÍ  
ČESKÉ REPUBLIKY



EU2022.CZ





# Risk Stratified Early Detection for Prostate Cancer

## The EAU Approach

em. Prof. Dr. Hein Van Poppel  
Urology, Kath. Univ. Leuven, Belgium  
Chairman EAU Policy Office





# Why did EAU have to undertake something?

1. Prostate Cancer is an important health problem
2. Prostate Cancer kills more men than sometime ago
3. Advanced PCa is terrible and is expensive
4. Screening decreases mortality but at the cost of overdiagnosis
5. Opportunistic Screening does not work






10,5Mio



EUROPEAN UROLOGY ONCOLOGY 4 (2021) 677-696

available at [www.sciencedirect.com](http://www.sciencedirect.com)  
journal homepage: [euoncology.europeanurology.com](http://euoncology.europeanurology.com)



**eaU**  
European Association of Urology

Priority Article

**Mortality Trends from Urologic Cancers in Europe over the Period 1980–2017 and a Projection to 2025**

Paola Bertuccio<sup>a,\*</sup>, Claudia Santucci<sup>b</sup>, Greta Carioli<sup>b</sup>, Matteo Malvezzi<sup>b</sup>, Carlo La Vecchia<sup>b</sup>, Eva Negri<sup>b,c</sup>

<sup>a</sup> Department of Biomedical and Clinical Sciences L. Sacco, Università degli Studi di Milano, Milan, Italy; <sup>b</sup> Department of Clinical Sciences and Community Health, Università degli Studi di Milano, Milan, Italy; <sup>c</sup> Department of Humanities, Pegaso Online University, Naples, Italy

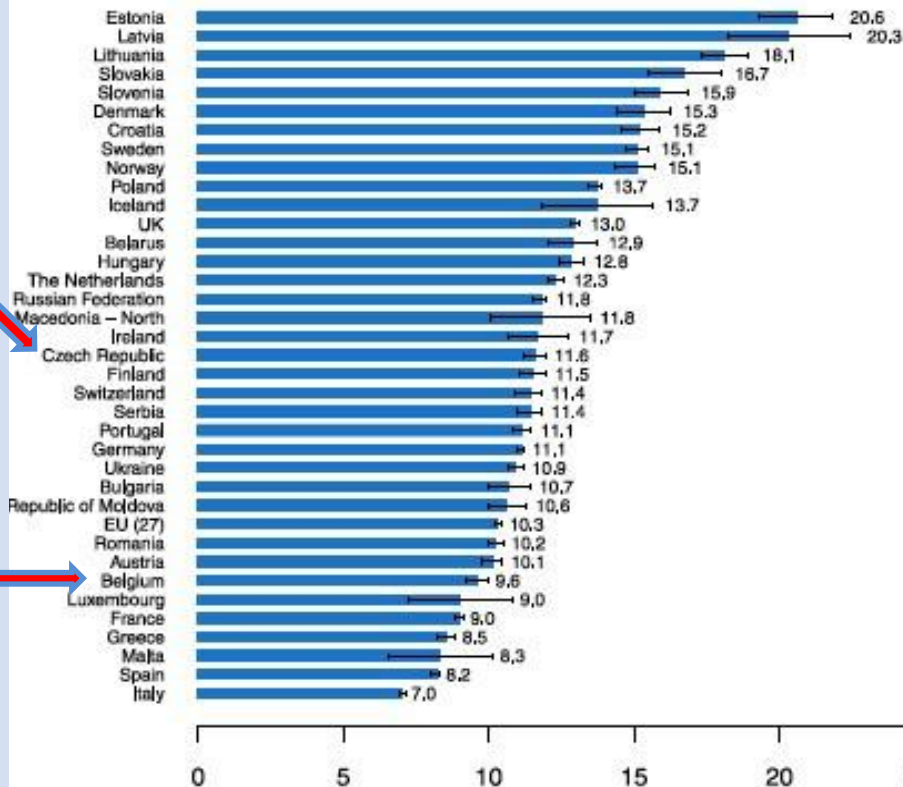


11Mio

4 PCa deaths/day



## Prostate





# Why did EAU have to undertake something?

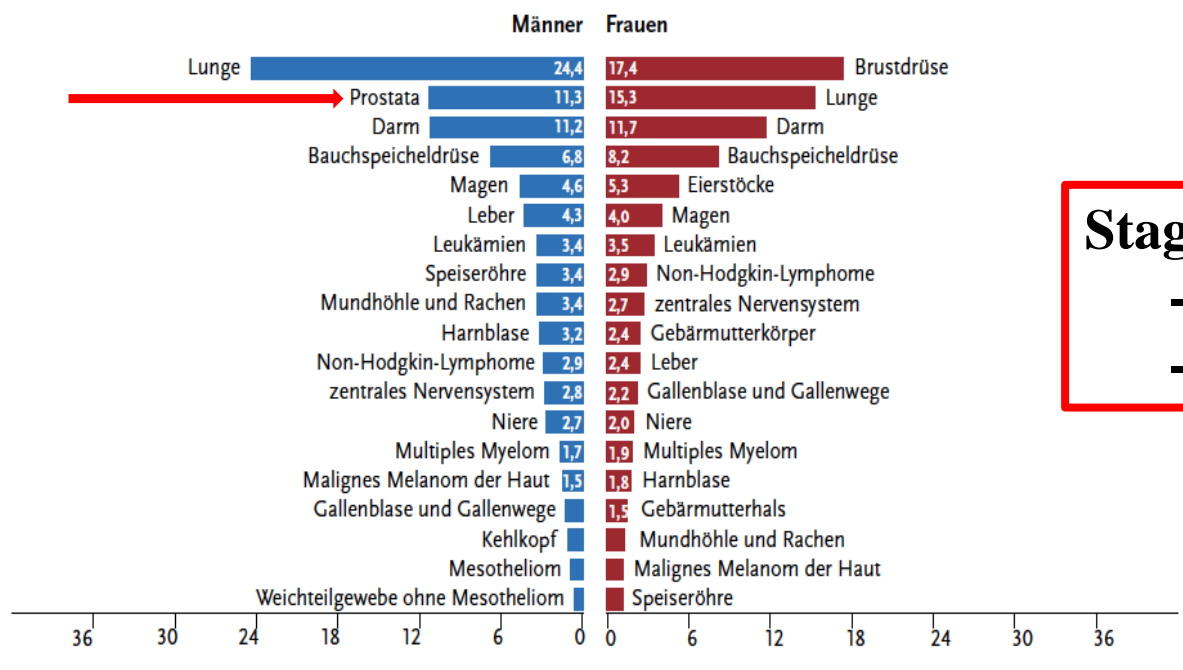
1. Prostate Cancer is an important health problem
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# Germany : number 2 male cancer killer

Abbildung 3.o.2  
Prozentualer Anteil der häufigsten Tumorlokalisationen an allen Krebssterbefällen in Deutschland 2014



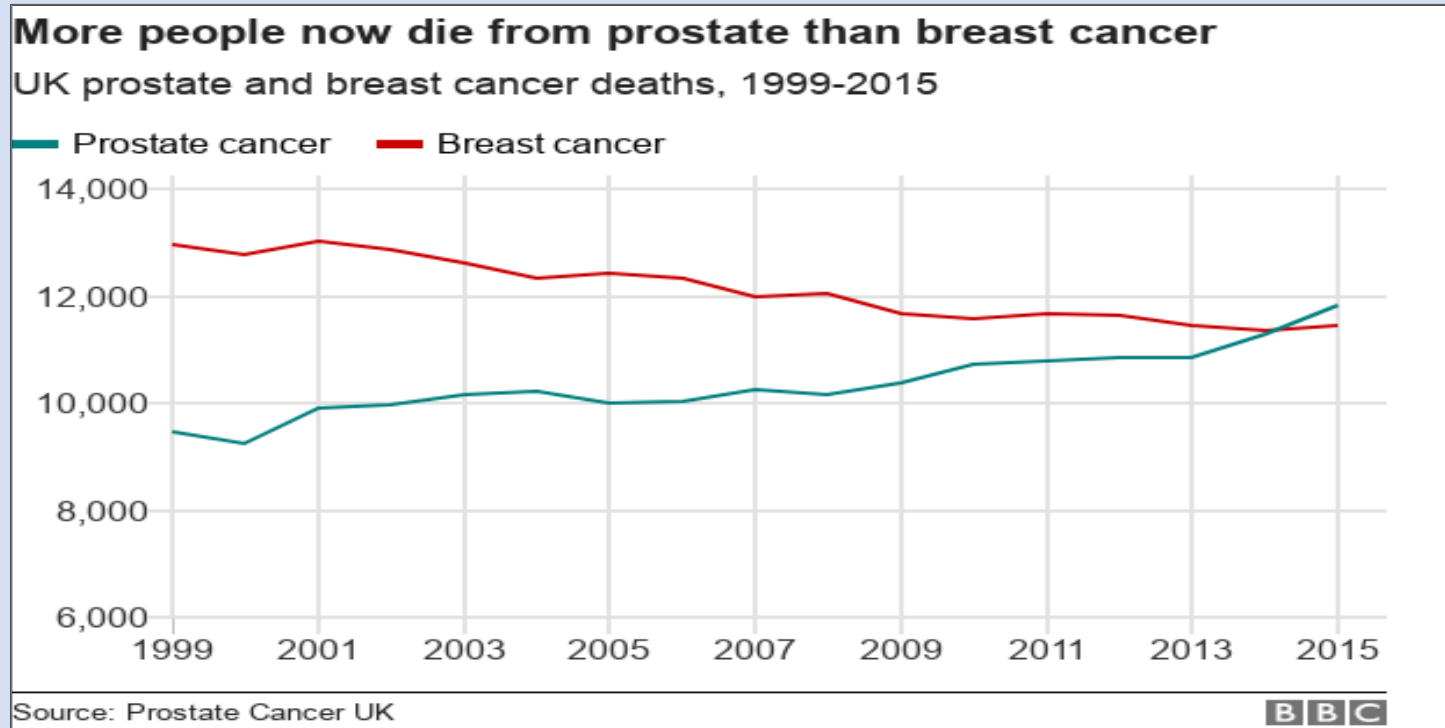
**Stage T3 at diagnosis:**  
- 29% in 2008  
- 49% in 2017

**Sweden: N°1**





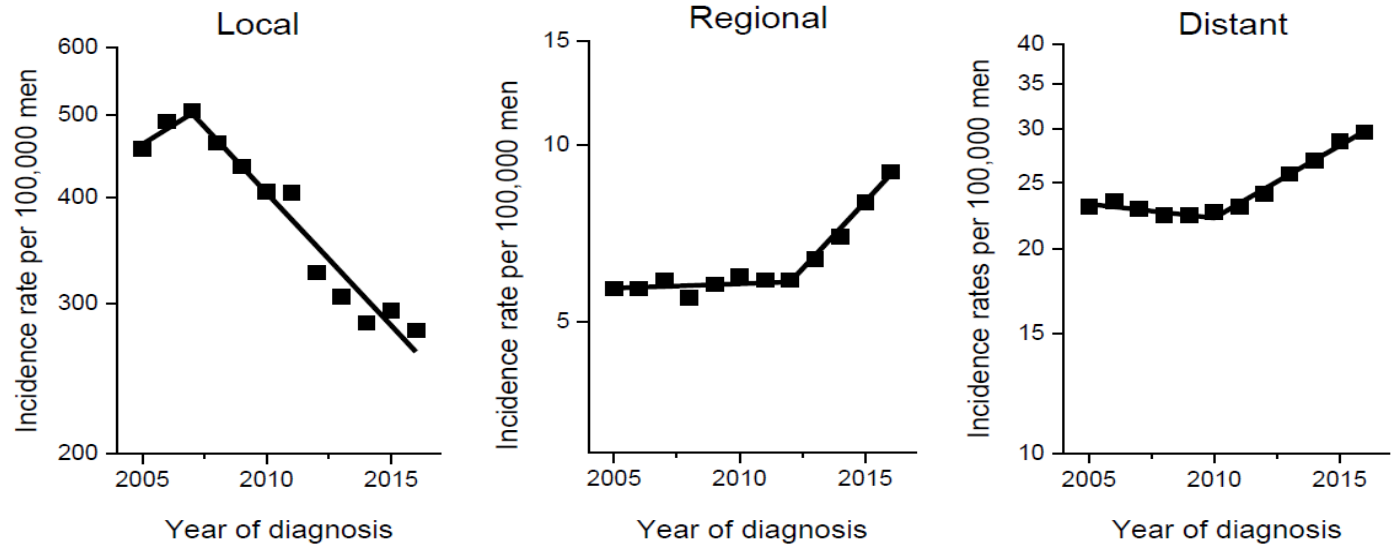
# UK: PCa death increased by 17% in 10 y.





# PCa Stage at diagnosis 5 years after USPSTF recommendations against Screening

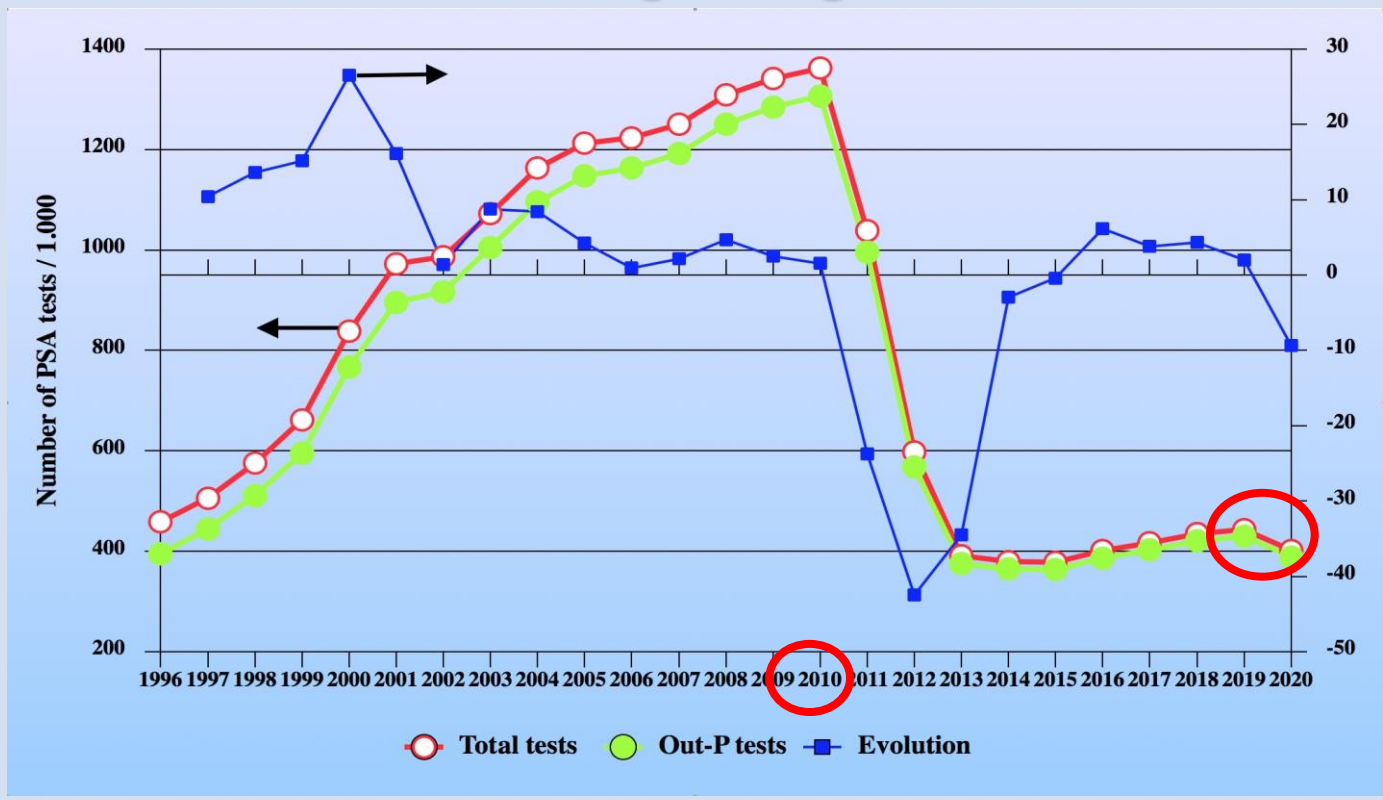
Figure 1







# PSA testing in Belgium

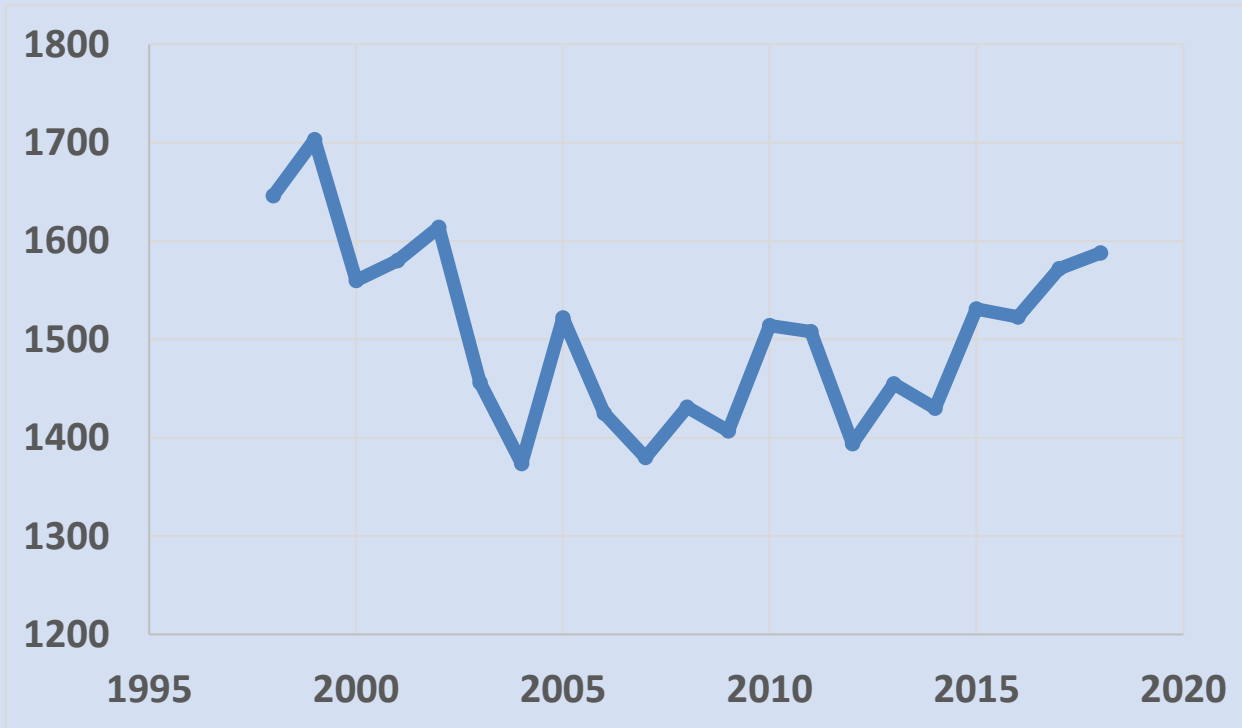


© Eric Briers





# Prostate Cancer Mortality in Belgium



© Eric Briers





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# Cost of “too late” detected PCa Care

The total cost of this man with PCa was close to **300.000€** over 18 years.



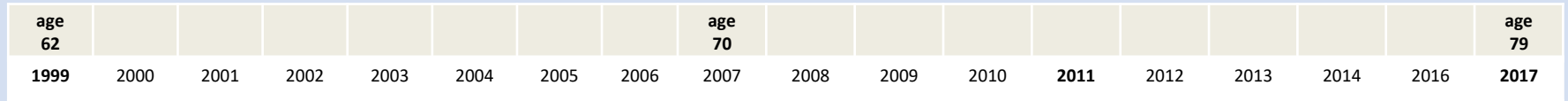
**€240,000** for drugs and supportive care last 2-4 years of life

**Surgery**  
€5,000

**Relapse: Radiotherapy**  
€5,000

**Medical Castration**  
€ 11,000

- Radium 223, Lu\*
  - Cabazitaxel
  - Enzalutamide
  - Docetaxel
  - Palliative Radiotherapy
  - Denosumab
  - Abiraterone
- 





# Why did EAU have to undertake something?

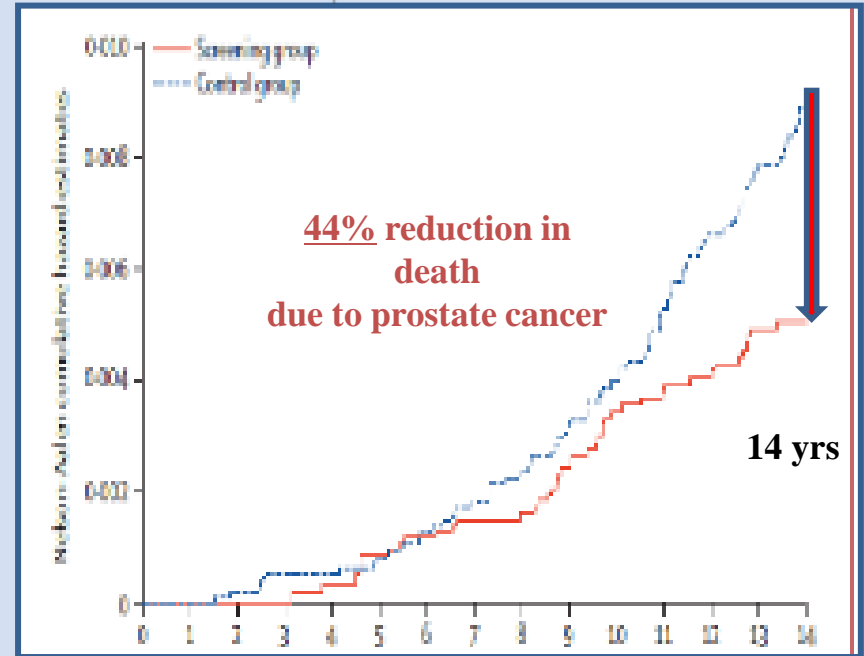
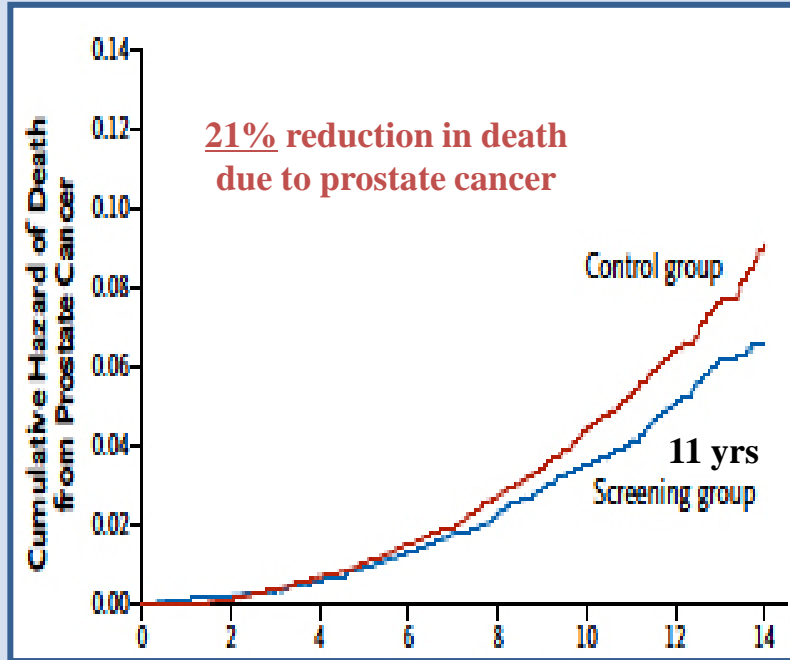
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# Screening randomised clinical trials (RCT)

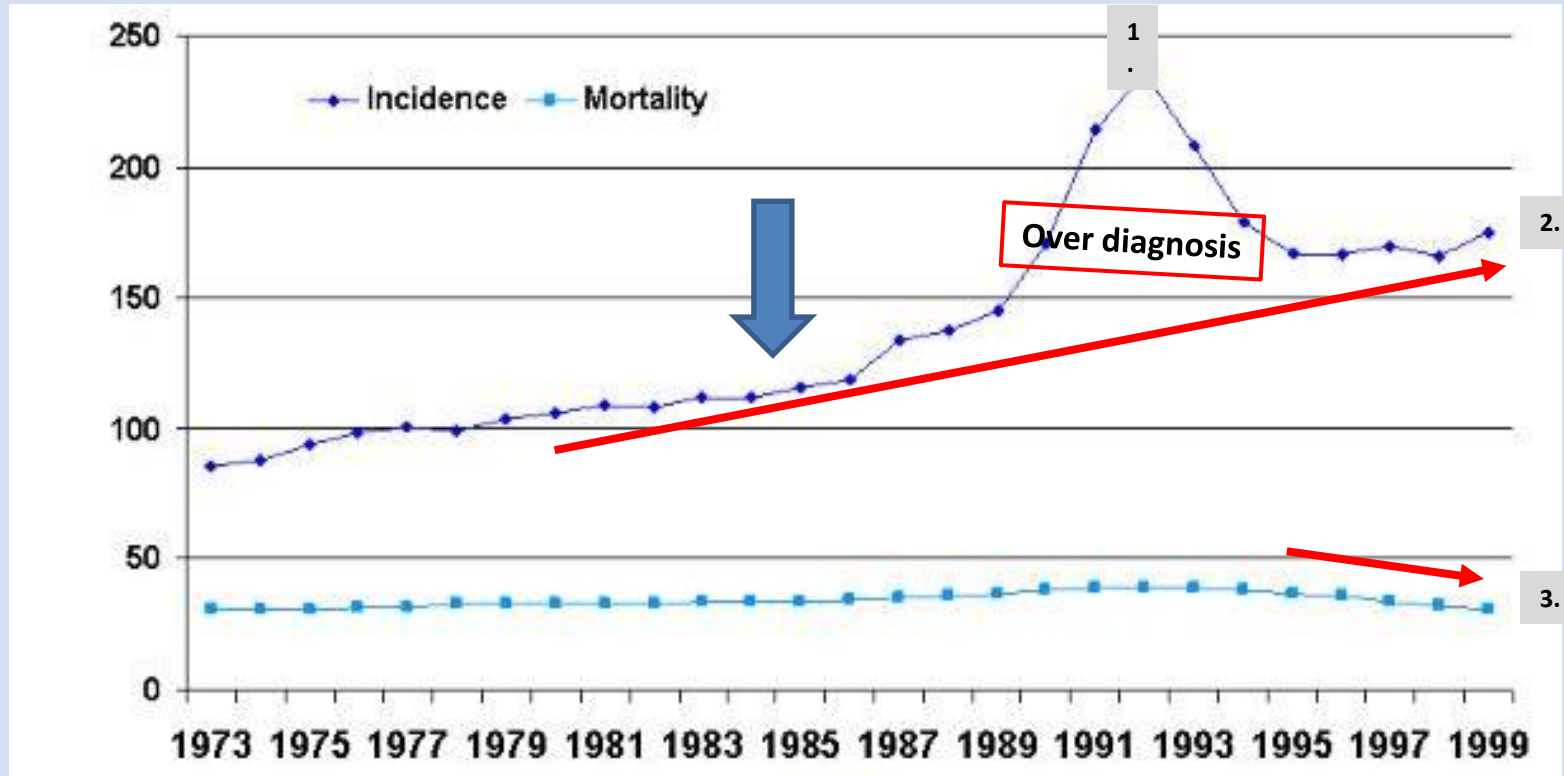


Göteborg trial



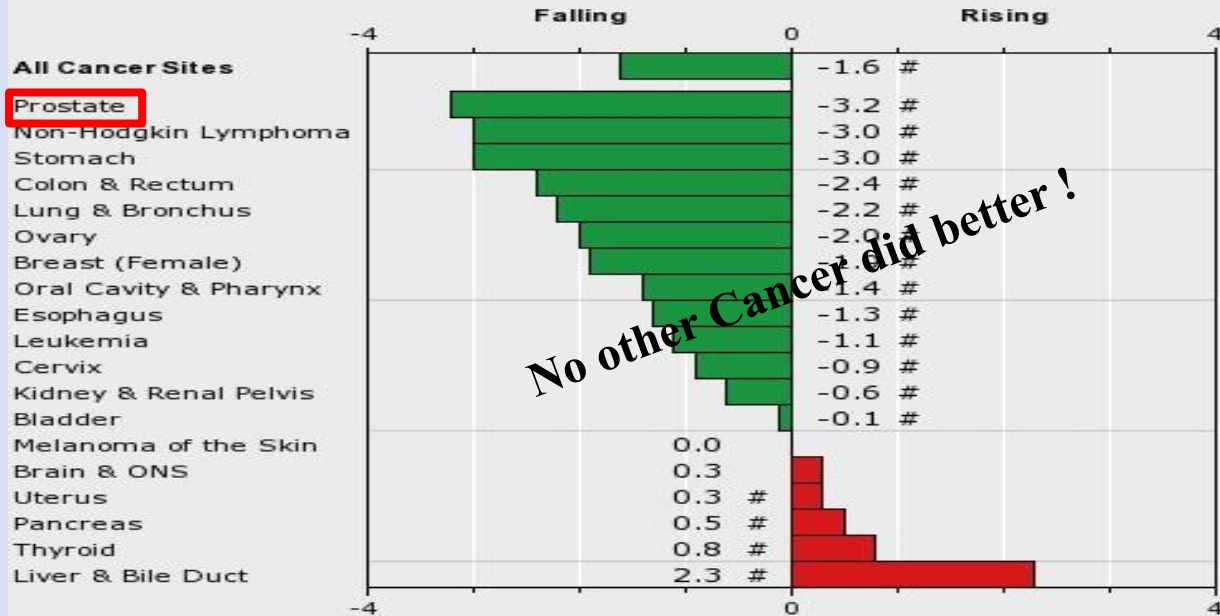


# Since the introduction of PSA...





### 5-Year Rate Changes - Mortality United States, 2005-2009 All Ages, Both Sexes, All Races (incl Hisp)



No other Cancer did better!

USPSTF



“At the cost of Over Diagnosis and Overtreatment”







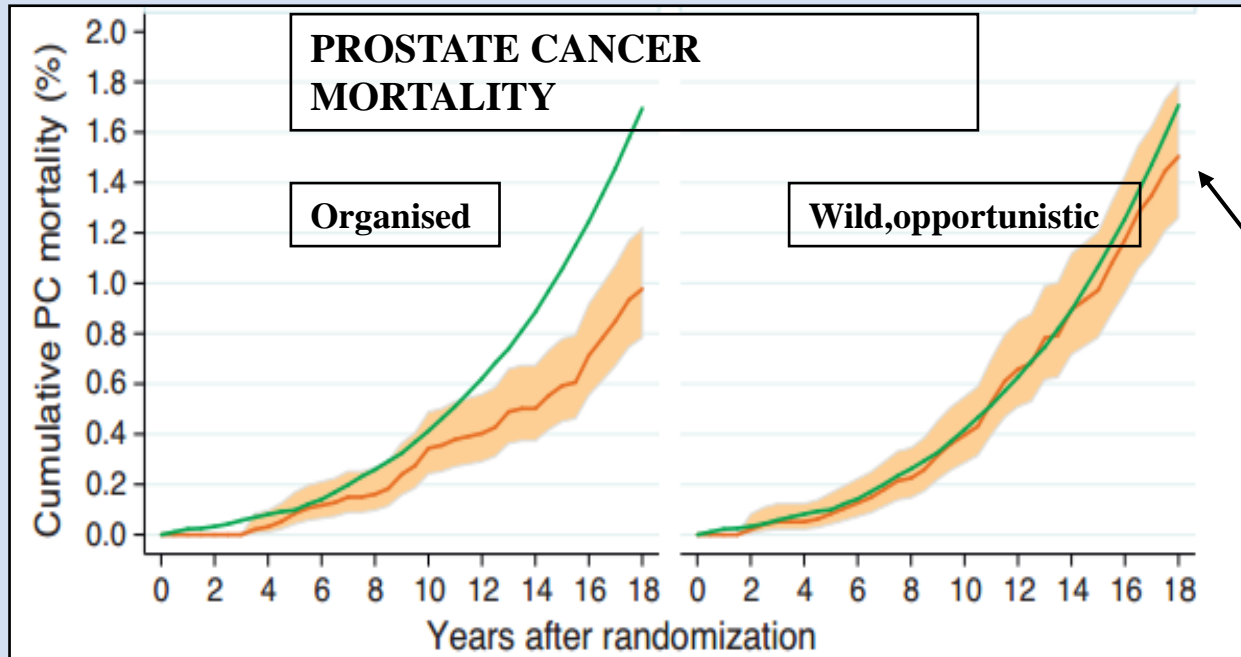
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1. Prostate Cancer is an important health problem
2. Prostate Cancer kills more men than sometime ago
3. Advanced PCa is terrible and is expensive
4. Screening decreases mortality but at the cost of overdiagnosis
5. Opportunistic Screening does not work and is costly





# Wild screening (opportunistic) does not avoid overdiagnosis/overtreatment



No effect  
On PCa  
mortality



# What did EAU undertake?

Make the Policy makers aware of these 5 points

Opportunity: Beat Cancer Plan

Prepare a novel way of Early Detection



that avoids overdiagnosis and overtreatment



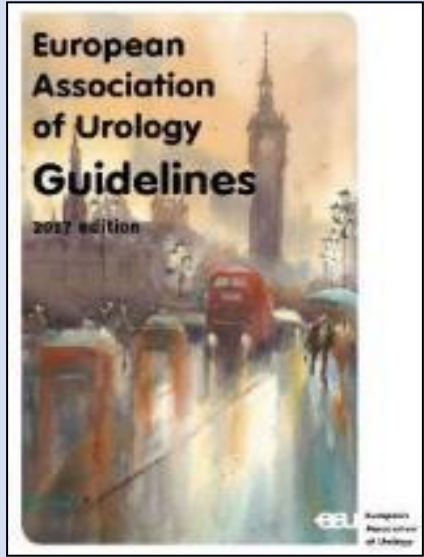
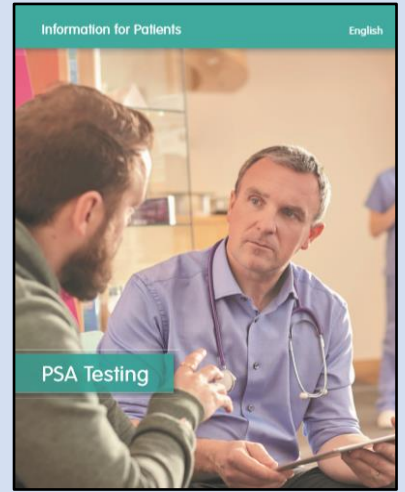


# EAU initiatives

18+ languages



## Well informed men



Endorsement of 58 National Societies

## Well informed HCP's

2017



2019



2020



## Well informed Policy makers





# EAU Lobbying at European Parliament



2017, 2019 and 2020





available at [www.sciencedirect.com](http://www.sciencedirect.com)  
journal homepage: [www.europeanurology.com](http://www.europeanurology.com)



European Association of Urology



Platinum Opinion

## Early Detection of Prostate Cancer in 2020 and Beyond: Facts and Recommendations for the European Union and the European Commission

Hendrik Van Poppel<sup>a,†,\*</sup>, Renée Hogenhout<sup>b,†</sup>, Peter Albers<sup>c,d</sup>, Roderick C.N. van den Bergh<sup>e</sup>, Jelle O. Barentsz<sup>f,†</sup>, Monique J. Roobol<sup>b,†</sup>





# We have made progress

## 1. We are able to substantially reduce over diagnosis:

- Better use of PSA: age-related PSA, PSA density, (PSA velocity)
- Risk calculators (PCPT and ERSPC) +/- molecular biomarkers

*Mannaerts CK, et al. Eur Urol Oncol 2018;1:109–17*

- mp(bp?)MRI before biopsy
  - ...decrease of number of biopsies
  - ...detect more significant and fewer insignificant cancers

*Amin A, et al. J Urol 2020;203:910–7*

## 2. We can reduce overtreatment:

- Application of active surveillance in 65% of low and intermediate risk
- Nomograms MAP (age, PSA, GG, MRI volume, PIRADS, MRI ECE)

*Lantz A, et al. Eur Urol Oncol 2022;5:187–94*







available at [www.sciencedirect.com](http://www.sciencedirect.com)  
journal homepage: [www.europeanurology.com](http://www.europeanurology.com)



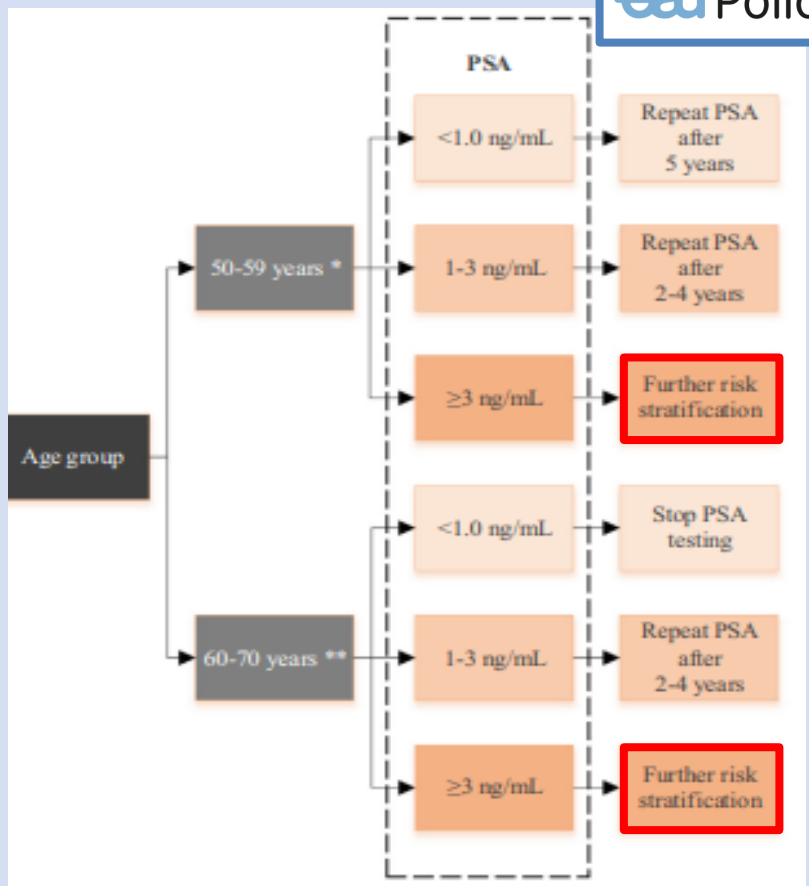
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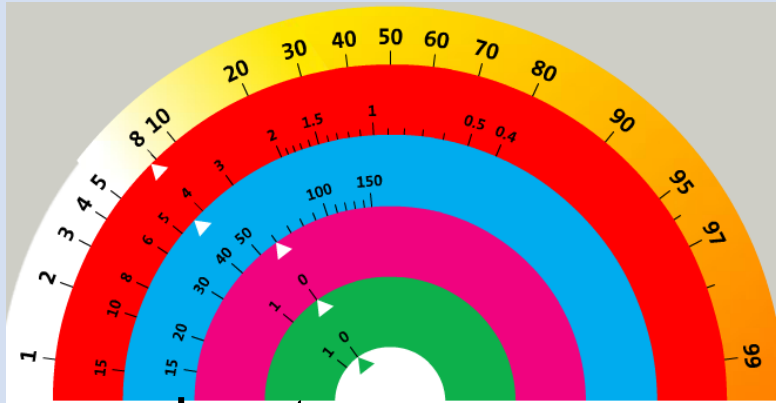
## Early Detection in well informed men

<https://patients.uroweb.org/tests/psa-testing/2020>



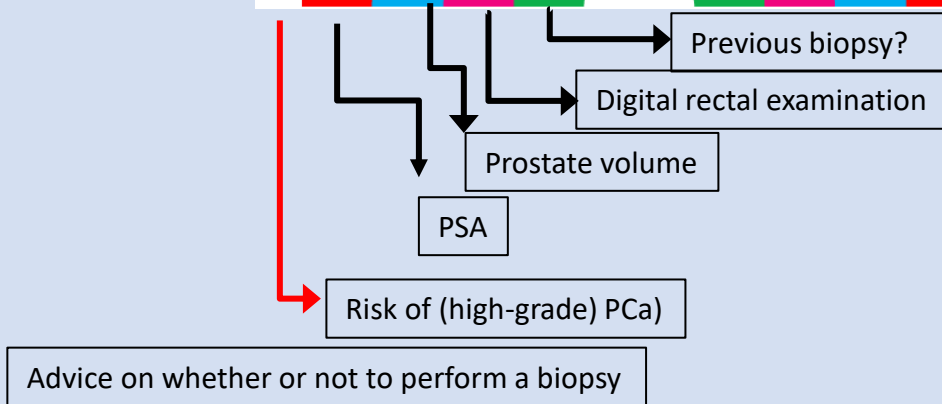


# The Rotterdam ERSPC risk calculators



[www.prostatecancer-riskcalculator.com](http://www.prostatecancer-riskcalculator.com)

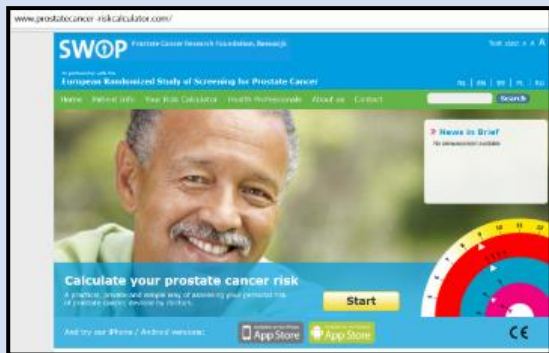
**20 – 33% reduction of unnecessary biopsy procedures**



Risk of positive biopsy	Action
< 12.5%	No biopsy
12.5 – 20.0%	Consider biopsy
> 20.0%	Biopsy

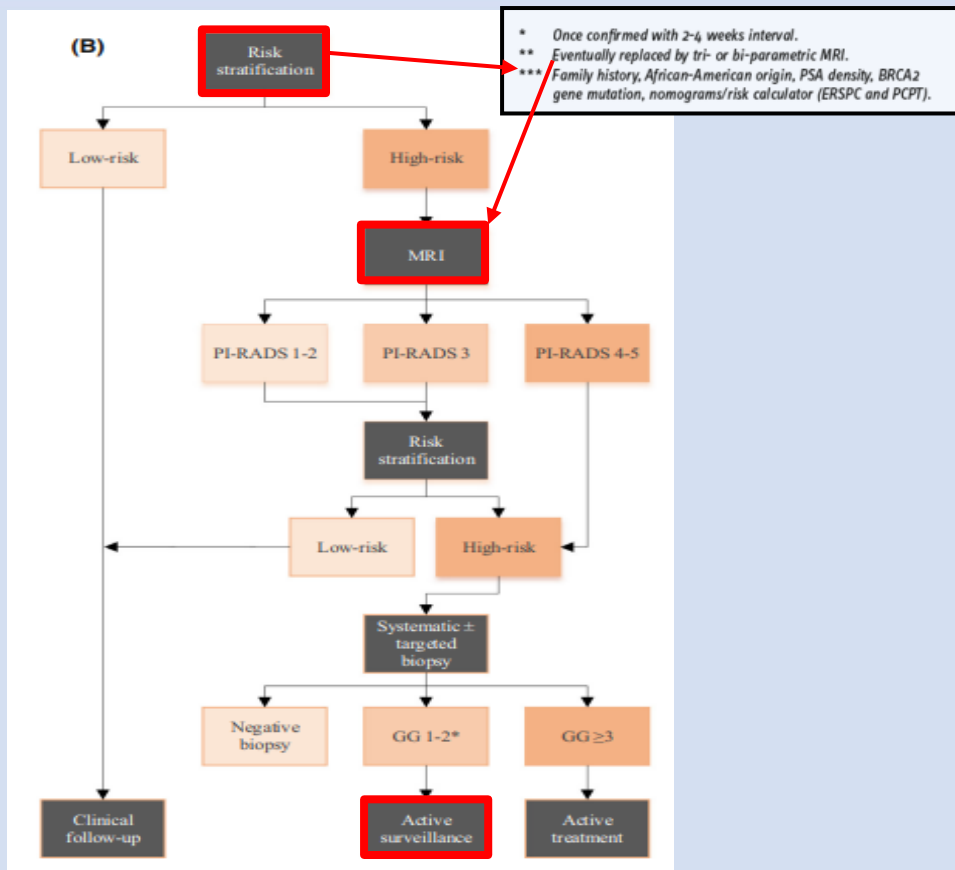
# Elevated PSA $\neq$ Biopsy

## Risk Calculators



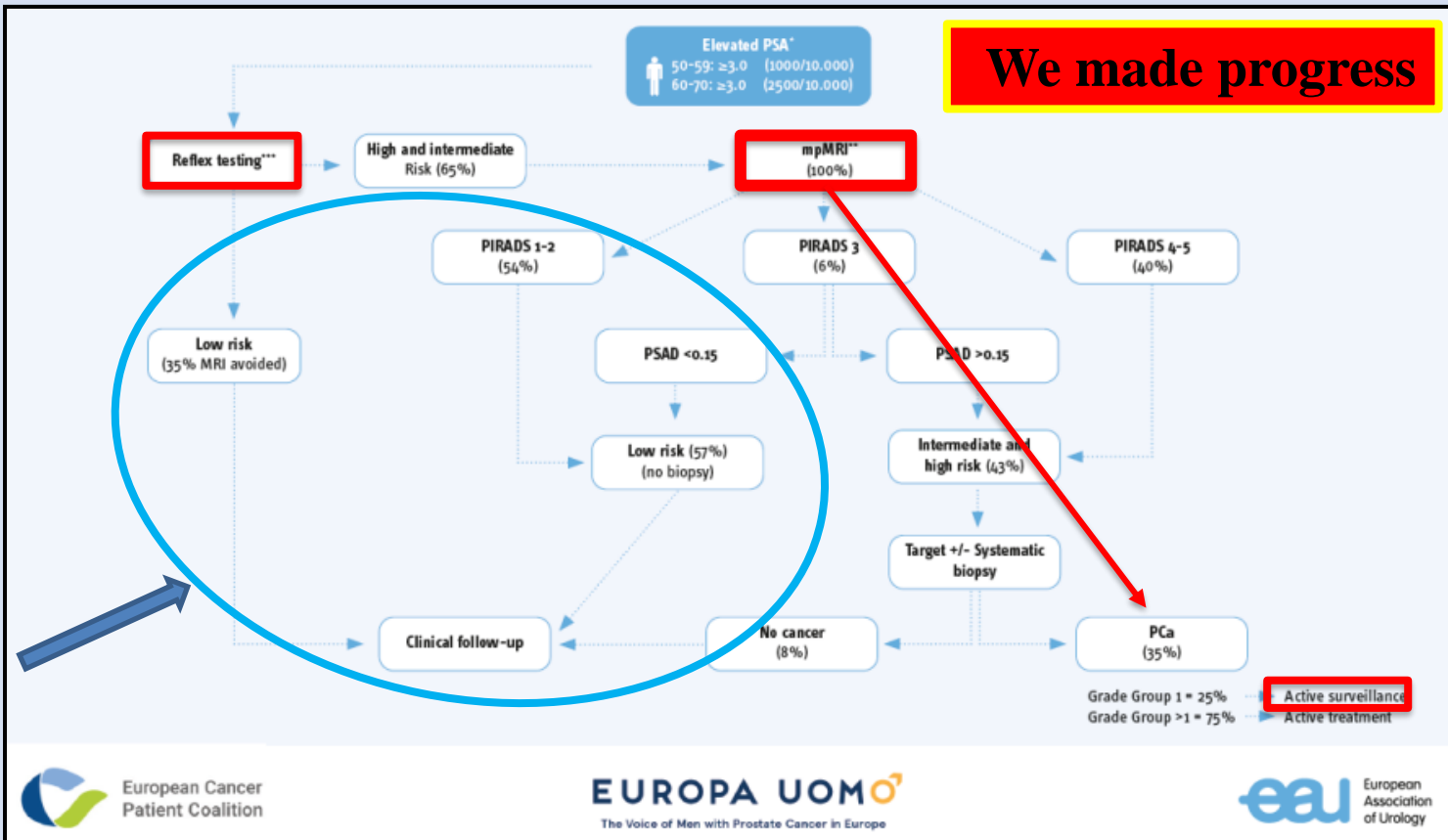
Free, quality controlled Risk Calculators available online:

- ERSPC: [www.prostatecancer-riskcalculator.com](http://www.prostatecancer-riskcalculator.com)
- PCPT: [Myprostatecancerrisk.com](http://Myprostatecancerrisk.com)
- Canada: [www.prostaterisk.ca](http://www.prostaterisk.ca)





**We made progress**



Biopsies avoided





# An Early Detection Strategy?

## Costs versus Savings

1. PSA: €10/x

2. mpMRI: €136 (bp as good?)

3. Early detected significant PCa  
€10-15,000

1. Less biopsies, less complications of biopsies and treatments

2. Less over-diagnosis, avoiding over-treatment

3. No costly treatment of castrate refractory disease

4. Less PCa deaths > increased professional life spent

5. Better QoL



# How to eliminate the second most killing cancer of men?

- Population-based, organized by informed invitation
  - well-informed men 50 till >10 y life expectancy
  - risk calculators, age-related PSA, PSAD and MRI
- Biopsy only those at risk for significant cancer
- Treat actively (RPr or RT) only those at risk to die from PCa
- Manage with active surveillance those with low /intermediate risk



Decrease mortality and improve Quality of Life + Decrease Cost



## 4 reasons to change things now

1. Decrease prostate cancer deaths (like breast, cervix, and colorectal)
2. Stop increasing rate of too-late diagnosis
3. Stop costly and inappropriate/inefficient opportunistic testing
4. Improve QoL of prostate cancer patients

**THE SOLUTION = ORGANIZED SCREENING**

**THE SOLUTION ≠ New RCT's to show that any new biomarker works**





# EAU Policy : Prostate Cancer

EAU Policy

- >25 years after ERSPC



- >5 years of lobbying at European level, EP, EU, EC, Regions, ...

- after publications on PCa Screening in EU, EUO in 2021 and NRU, GP journals in 2022...

- After EAU Recommendations published in EU in 2021:
  - PSA ↑ = Biopsy (ERSPC) → Risk Assessment, MRI and AS

What have we achieved?





# EAU, EU, and PCa screening

## Cancer screening in Europe

Expert workshop 1  
21 September 2021

What is the scientific basis for extending screening programmes to other cancers — including lung, prostate, gastric, oesophageal and ovarian cancers — and ensuring their feasibility throughout the EU?

SAPEA  
Science Advice for Policy by European Academies

“The experts find the scientific basis for organised prostate cancer screening strong provided that the age criteria are appropriate. It is likely that MRI will become part of prostate screening in the future. We strongly recommend that we need to address the high levels of opportunistic PSA testing in order to reduce overdiagnosis and harm.”

The EU4Health program currently has a funding call that will open the way to initiate population-based PCa screening pilot studies, which will lead to a state-of-the-art population-based program suitable for Europe and the rest of the world.

MRI, magnetic resonance imaging ; PCa, prostate cancer; PSA, prostate-specific antigen.

Cancer screening in Europe: Expert Workshop 1.  
<https://sapea.info/wp-content/uploads/cancer-screening-workshop-report-01.pdf>.







# EU Presidencies 2022 – 2033

## January 1 – June 30

2022	France
2023	<u>Sweden</u>
2024	Belgium
2025	Poland
2026	Cyprus
2027	Lithuania
2028	Italy
2029	Luxembourg
2030	Slovakia

## July 1 – December 31

<u>Czech Republic</u>
Spain
Hungary
Denmark
Ireland
Greece
Latvia
Netherlands
Malta

**2021-2022: Population based screening is done since years in Lithuania and in an increasing number of regions in Sweden**





# EU4H Call for Proposal: Monitor and strengthen implementation of innovative approaches to PCa screening

## PRAISE

### WP1: Project Coordination

#### WP2 Knowledge Hub 'Know how' & delivery

- Needs Assessments
- Reports (8m)
- State of play
- Reviews of Risk-benefits
- Cost Effectiveness
- Indicators development
- Mechanism/  
Repository of new approaches

#### WP3 Resources "Model for screening"

- Guidance on how to implement and design screening programmes
- Quality Assurance tools for monitoring indicators
- Tools for outreach
- Training tools
- Patient involvement

#### WP4 Pilots

2-3 pilots from different regions/countries

### WP5 Evaluation & Sustainability

### WP6 Communication and dissemination (incl high level conference)



