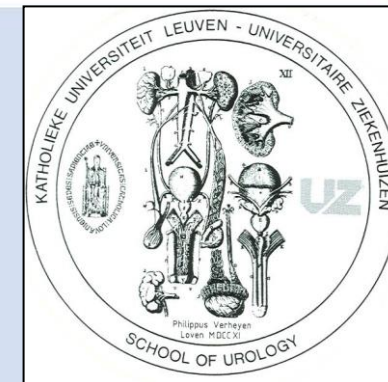




Early Detection of Prostate Cancer



**What went wrong ?
Where are we since 2003 ?
Where are we since ERSPC ?**

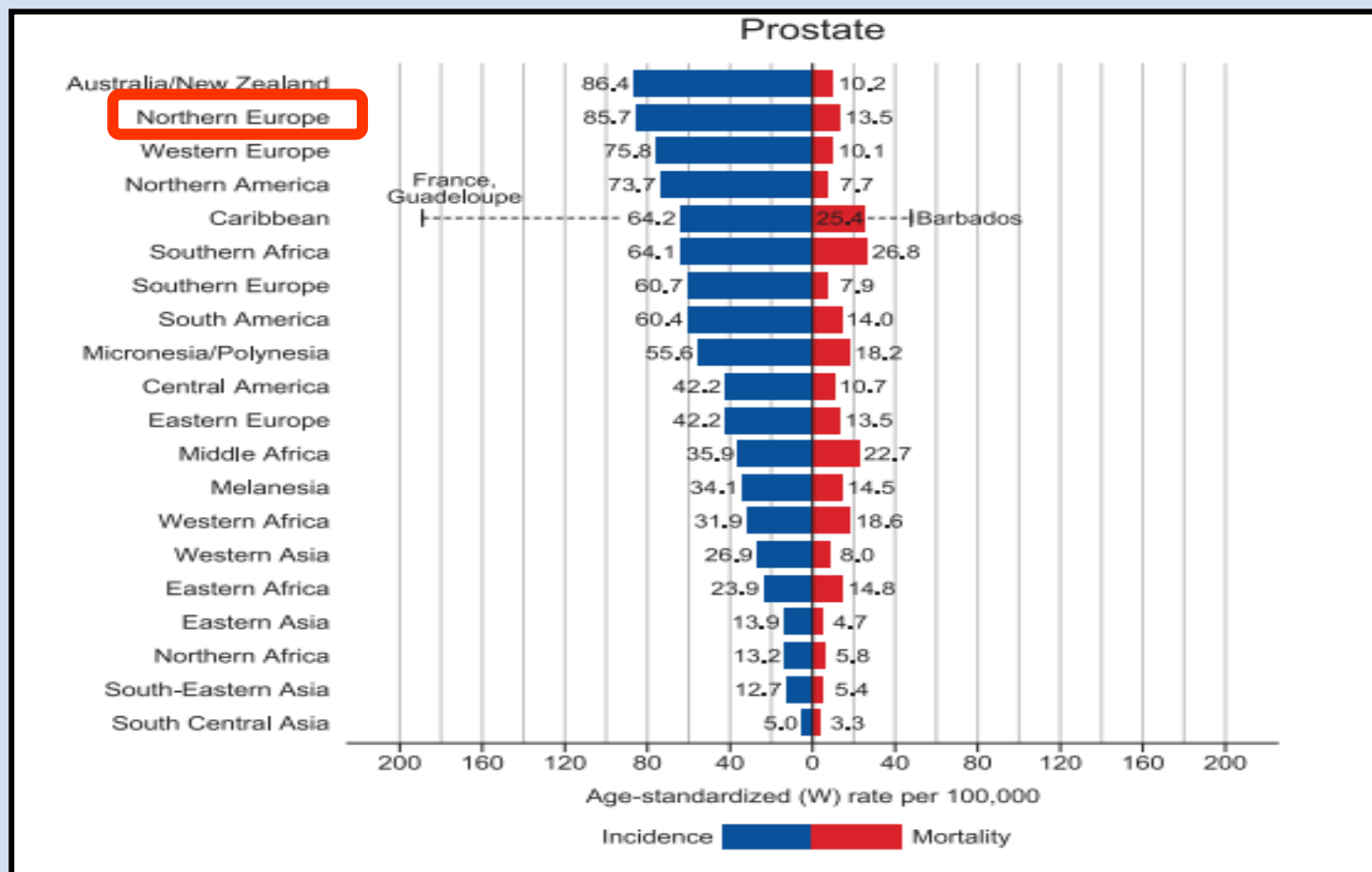
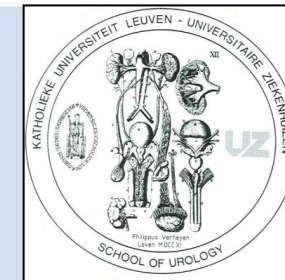
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em. Prof. Dr. Hein Van Poppel
Urology, Kath. Univ. Leuven, Belgium
Chairman EAU Policy Office



Prostate Cancer World

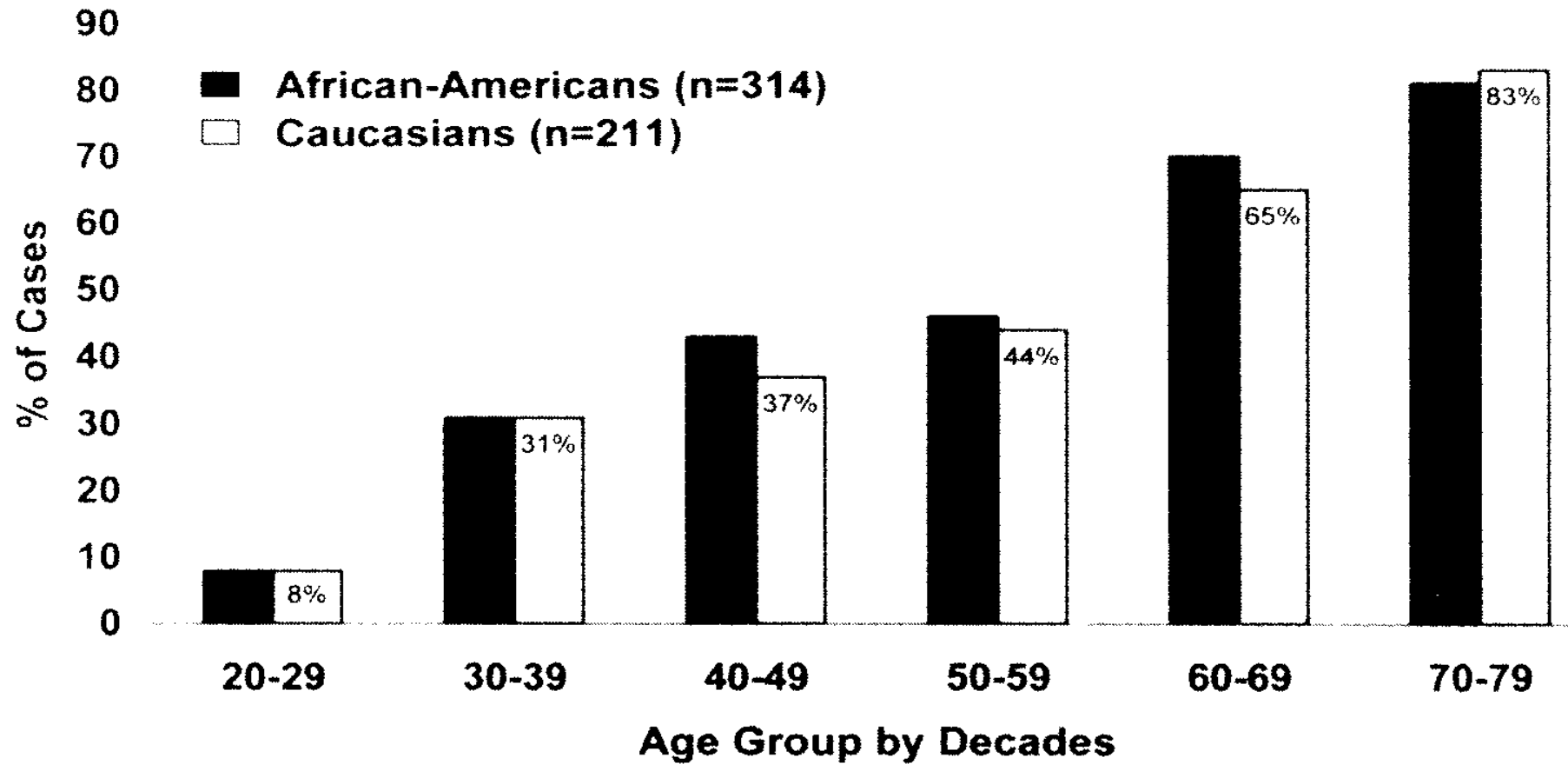
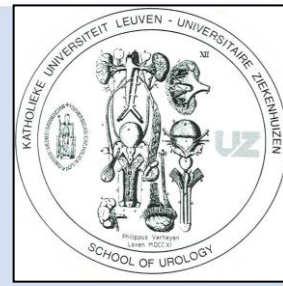


Bray F et al. Global cancer statistics; CA Cancer J Clin. 2018; 68:394-424





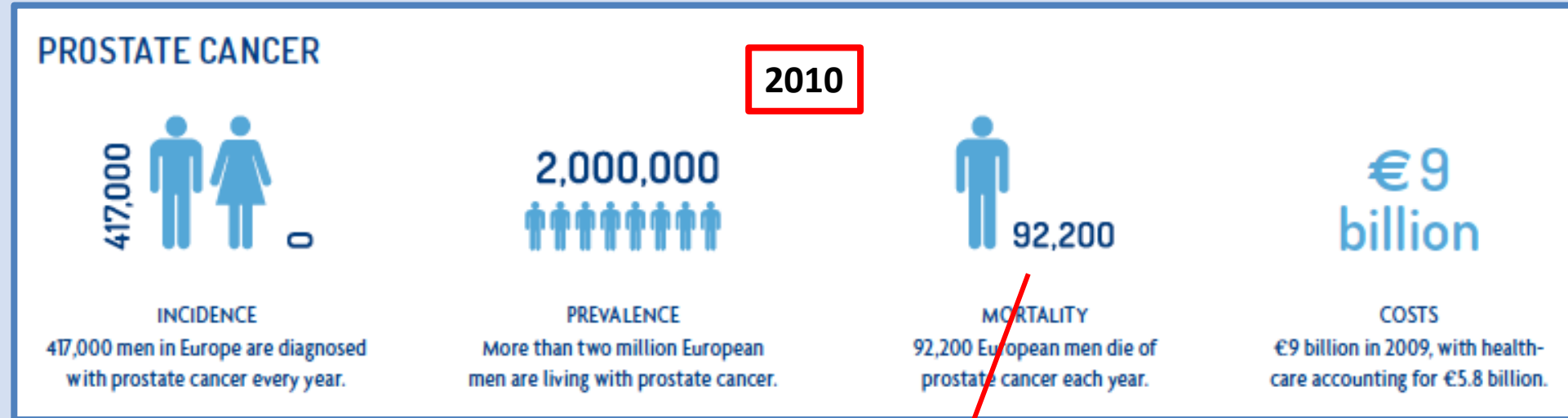
Prostate Cancer on Autopsies



Sakr W, Eur Urol 30:138, 1996



Prostate Cancer in Europe

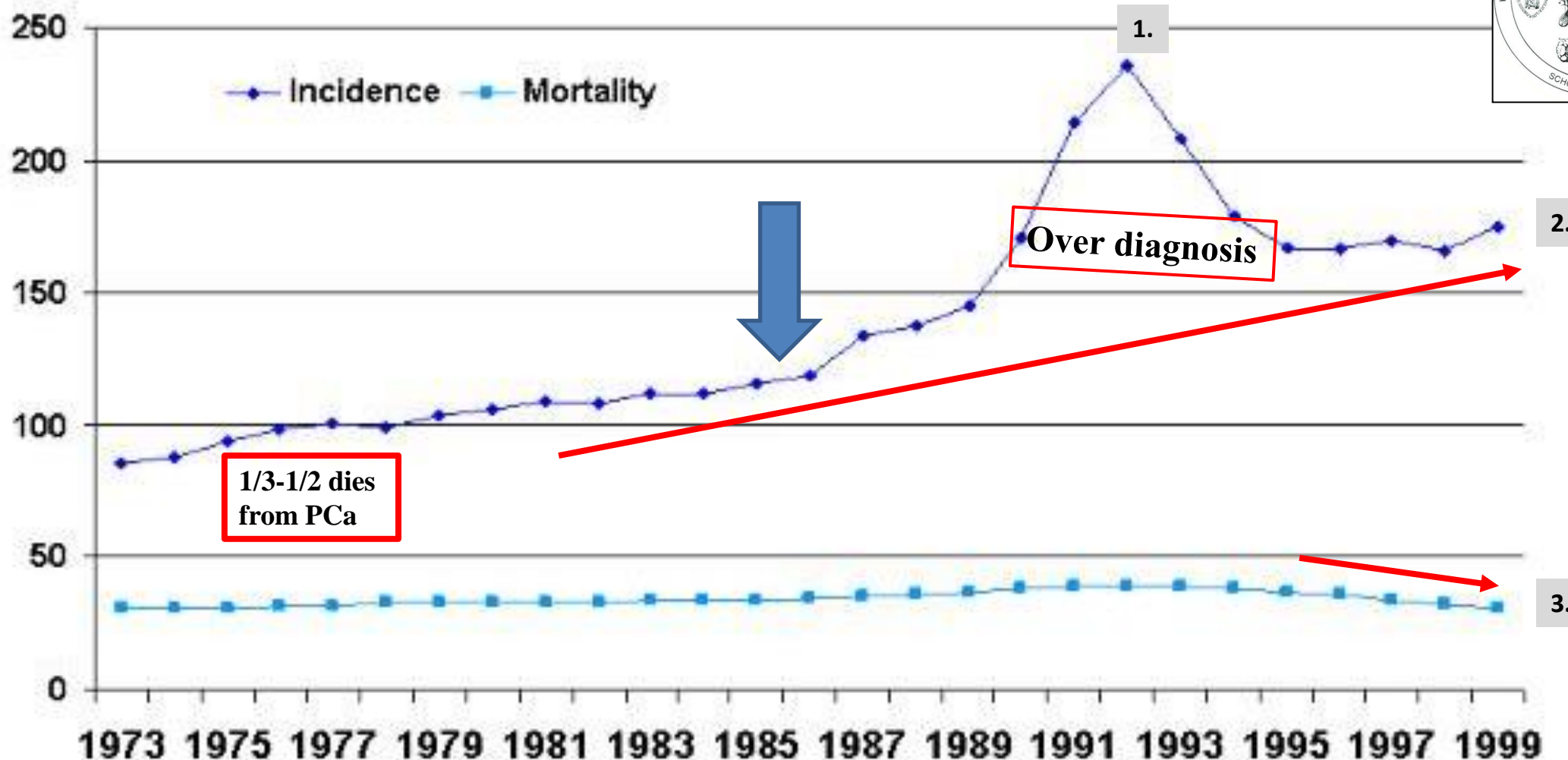
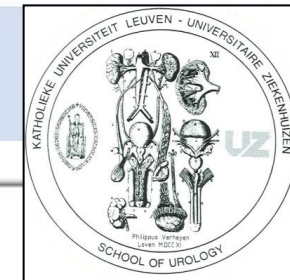


107.000  in 2018 (!)

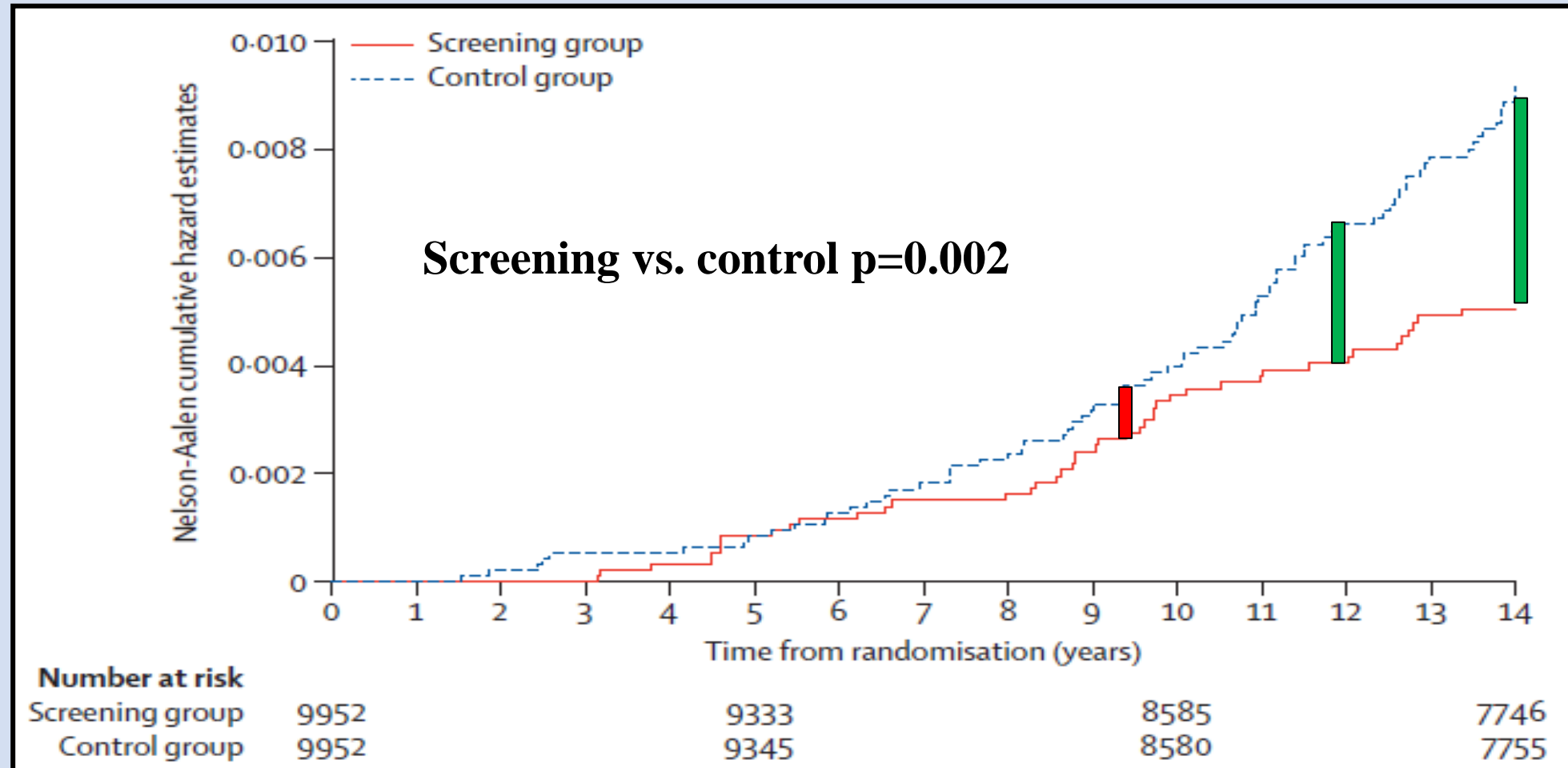
- Prostate cancer is the most common male cancer in the EU
- 1 in 7 men in Europe will develop prostate cancer
- It cannot be prevented and is asymptomatic in curable stages
- There is no population-based Screening program unlike for Breast, ...



Since the introduction of PSA...



Göteborg: Cancer Specific Mortality



Hugosson et al. Eur. Urol. 2019



“At the cost of Over Diagnosis and Overtreatment”

PSA = Victim of its own Success

Testing was discouraged!

- Prostate cancer is said not to be a killing disease:
 - “You will die with, not from prostate cancer”
 - It is an indolent old men’s disease
- (Unnecessary) treatment can lead to unpleasant side effects
- Testing leads to overdiagnosis and overtreatment: Benefits<<<<harms

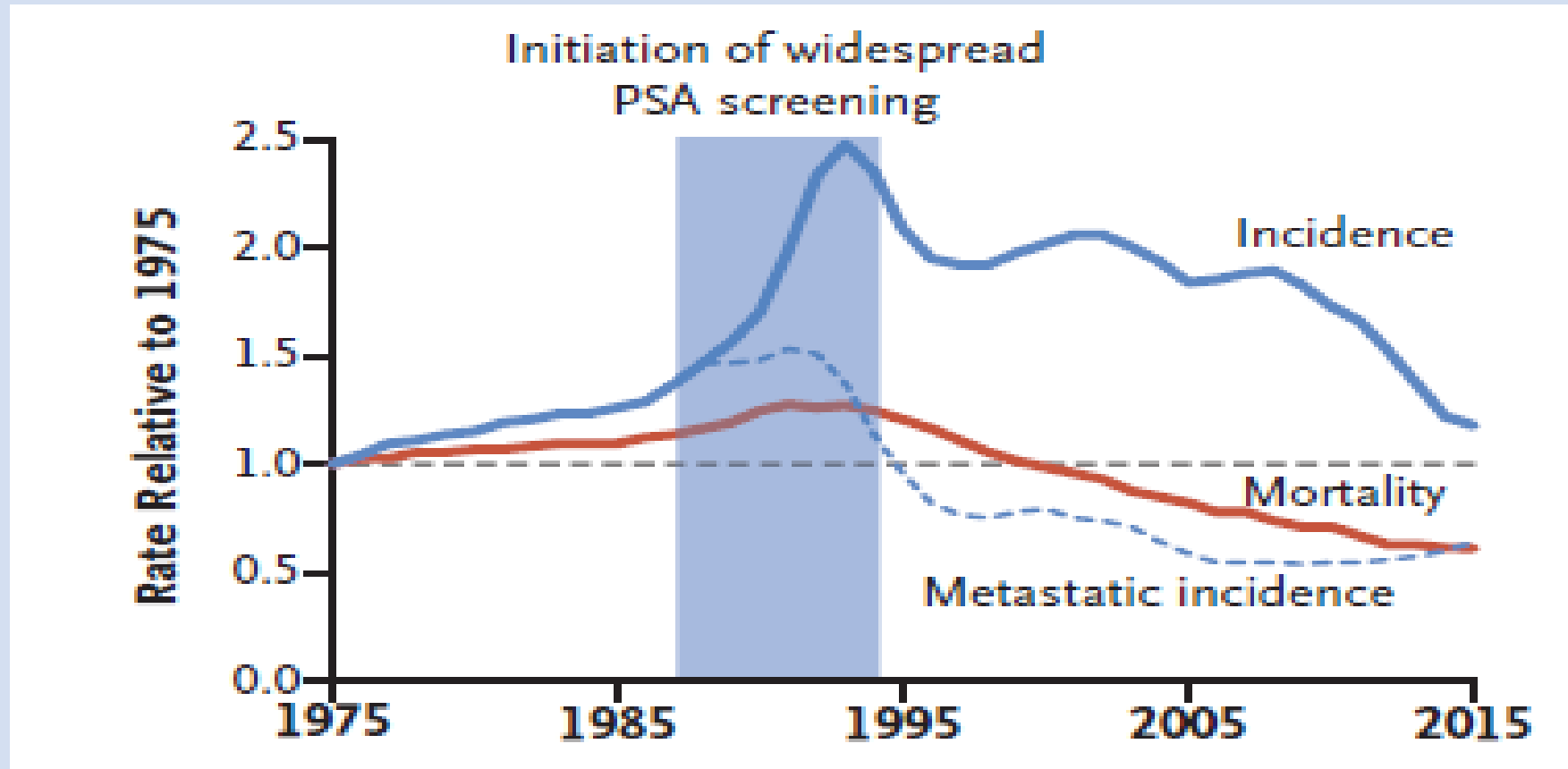
(We were not able to discriminate between significant and insignificant cancer)



Anti - PSA Propaganda initiated by USPSTF !

What happened with less PSA testing?

Prostate Cancer Incidence-Mortality in men >40y 1975-2015



HG Welch et al., Epidemiologic Signatures in Cancer NEJM 2019, 381: 1378-86


PCa 2019 USA (USPSTF)

Incidence=n°1




Mortality=n°2

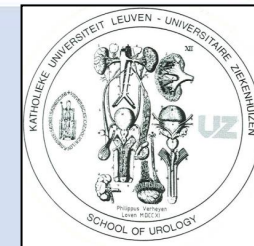
Prostate	174,650	20%
Lung & bronchus	116,440	13%
Colon & rectum	78,500	9%
Urinary bladder	61,700	7%
Melanoma of the skin	57,220	7%
Kidney & renal pelvis	44,120	5%
Non-Hodgkin lymphoma	41,090	5%
Oral cavity & pharynx	38,140	4%
Leukemia	35,920	4%
Pancreas	29,940	3%
All Sites	870,970	100%



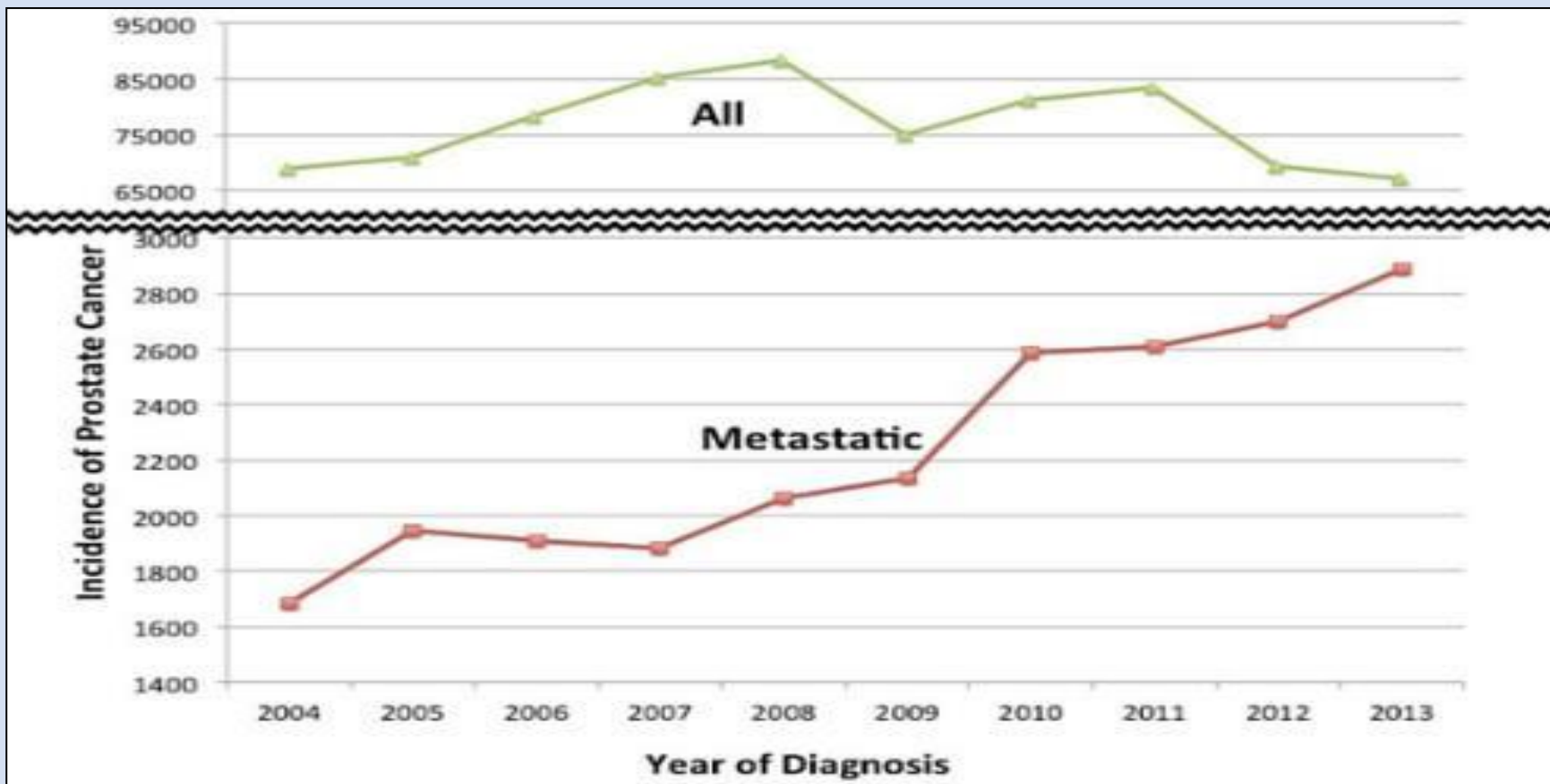
			Males
Lung & bronchus	76,650	24%	
Prostate	31,620	10%	
Colon & rectum	27,640	9%	
Pancreas	23,800	7%	
Liver & intrahepatic bile duct	21,600	7%	
Leukemia	13,150	4%	
Esophagus	13,020	4%	
Urinary bladder	12,870	4%	
Non-Hodgkin lymphoma	11,510	4%	
Brain & other nervous system	9,910	3%	
All Sites	321,670	100%	



Siegel et al., CA Cancer Clin. 2019



USA: Cases of aggressive PCa on the rise



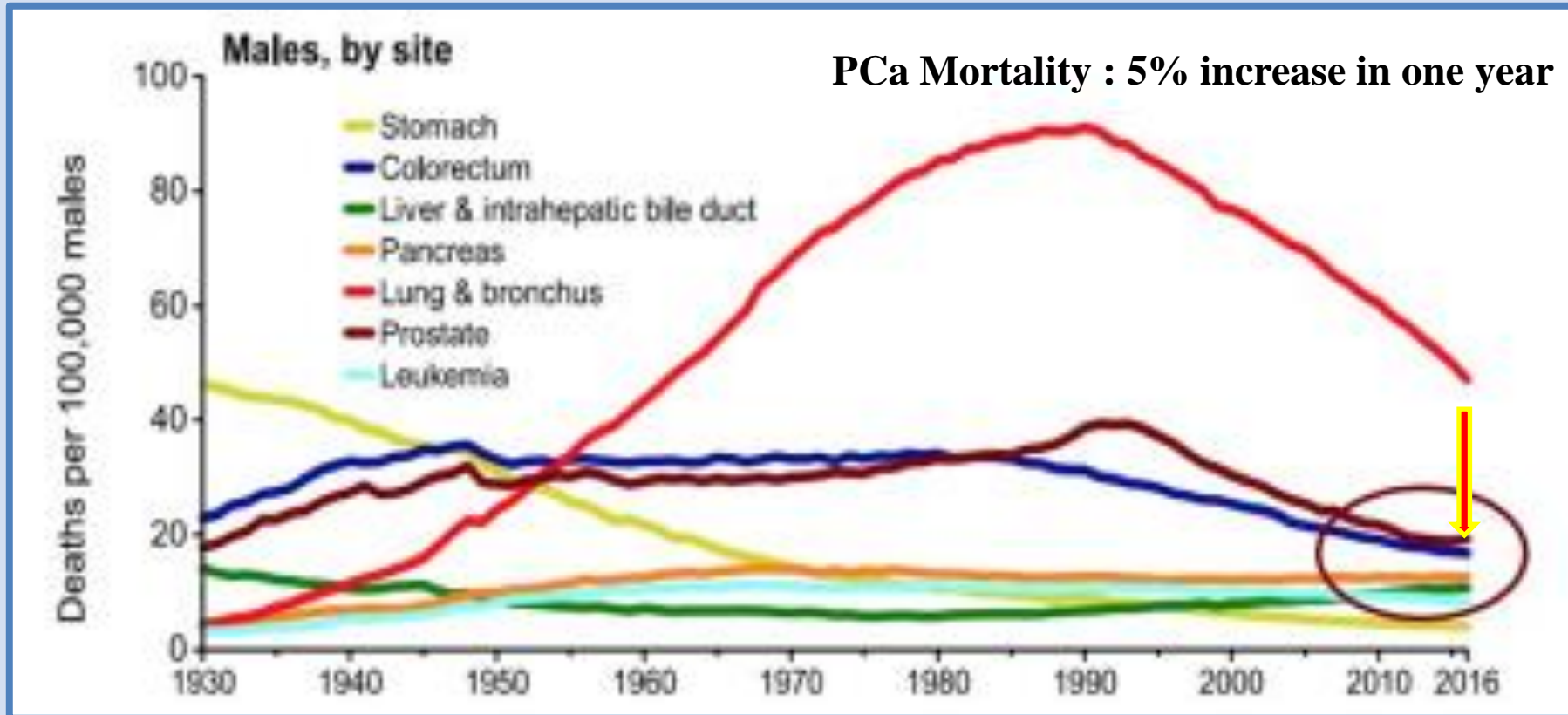
“Reverse Migration”

Prostate cancer more and more detected too late

Weiner A. et al., Prostate Cancer and Prostatic Diseases, 2016



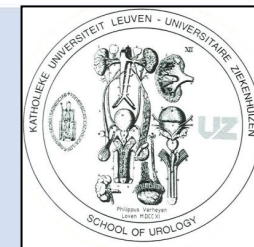
The consequence of less PSA testing?



Welch and Albertsen, NEJM, 2020

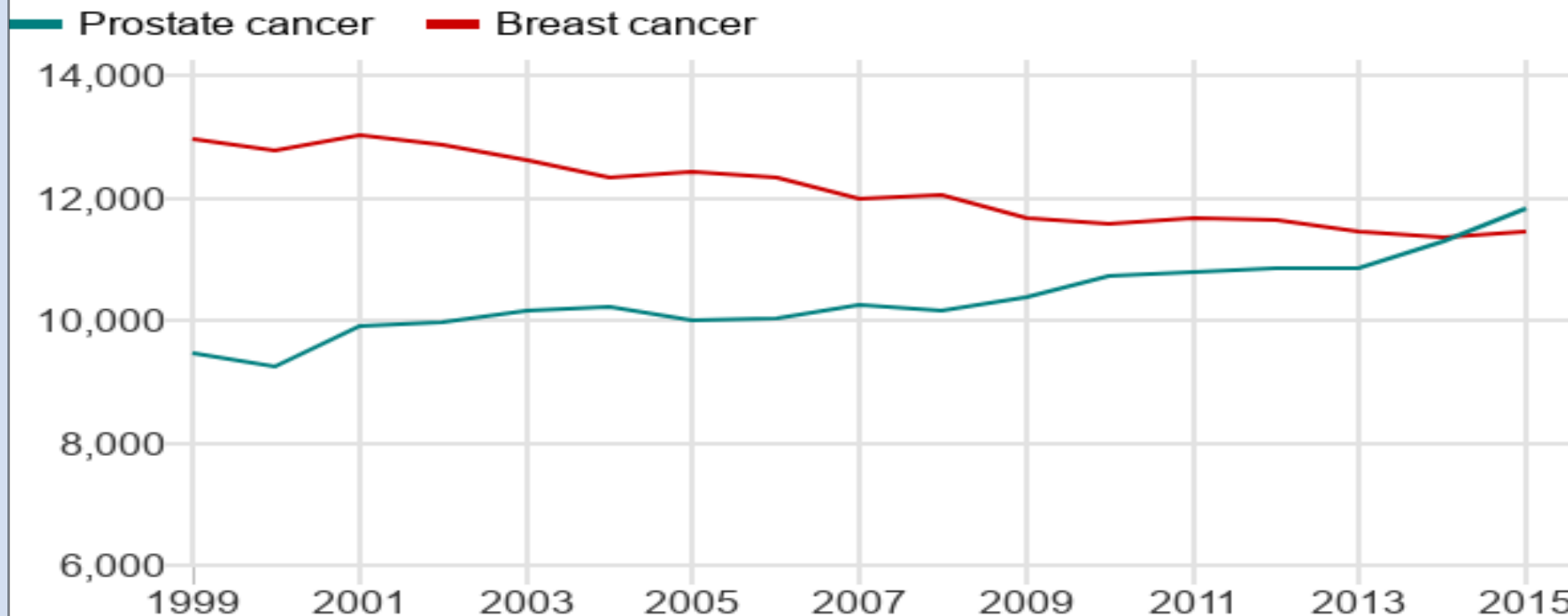


UK: PCa death increased by 17% in 10 y.



More people now die from prostate than breast cancer

UK prostate and breast cancer deaths, 1999-2015



Source: Prostate Cancer UK

BBC



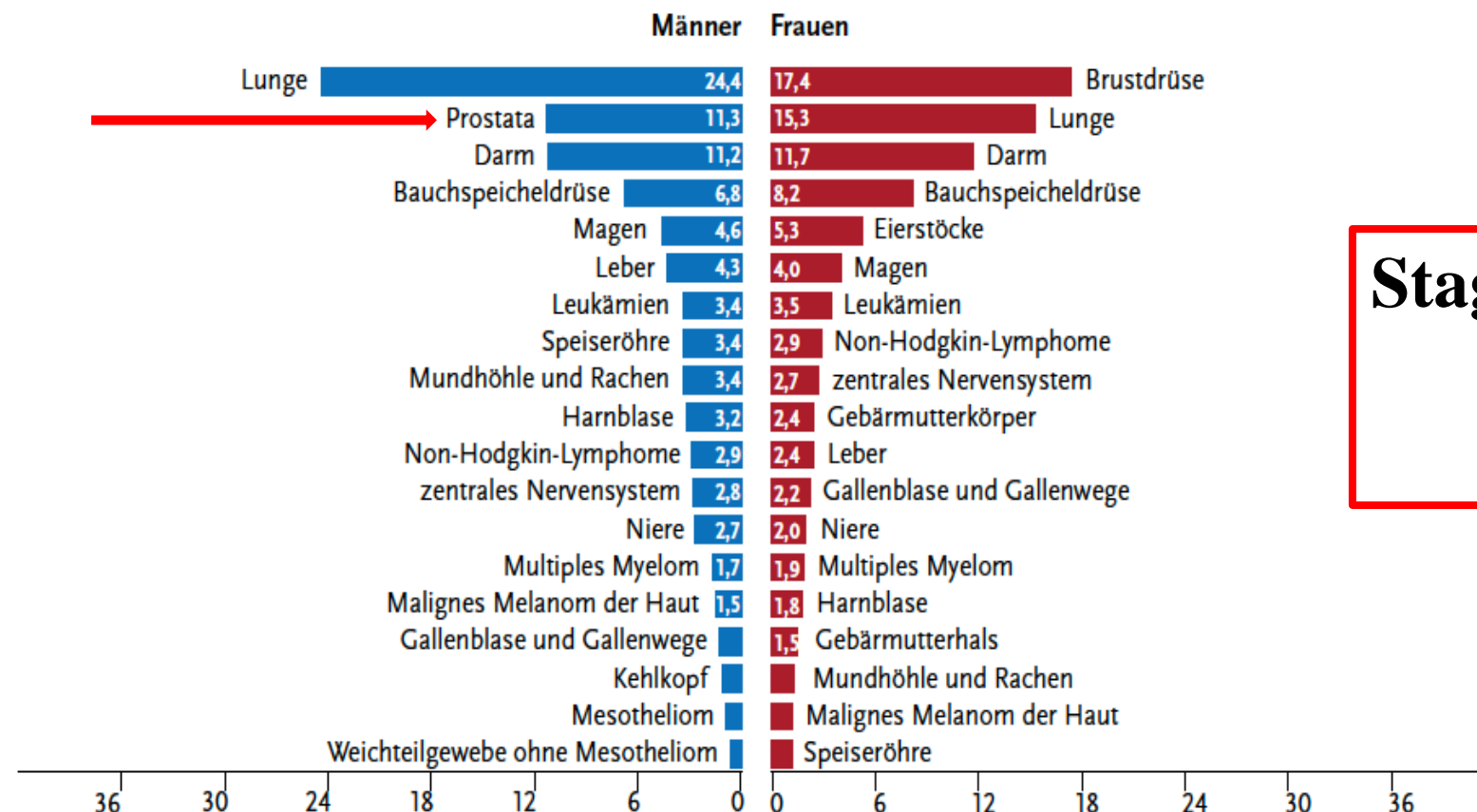
<http://spcsg.ca/reading-material/prostate-cancer-deaths-overtake-breast-cancer/>

EAU
European
Association
of Urology

Germany: number 2 male cancer killer

Abbildung 3.o.2

Prozentualer Anteil der häufigsten Tumorlokalisationen an allen Krebssterbefällen in Deutschland 2014



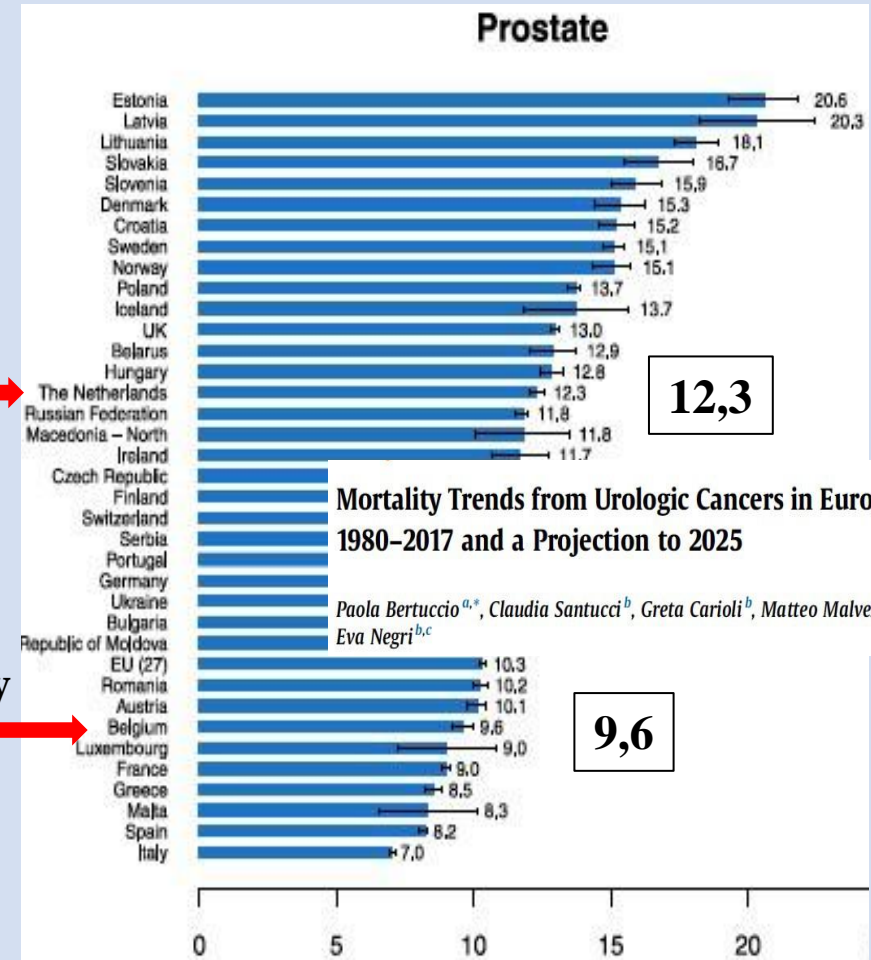
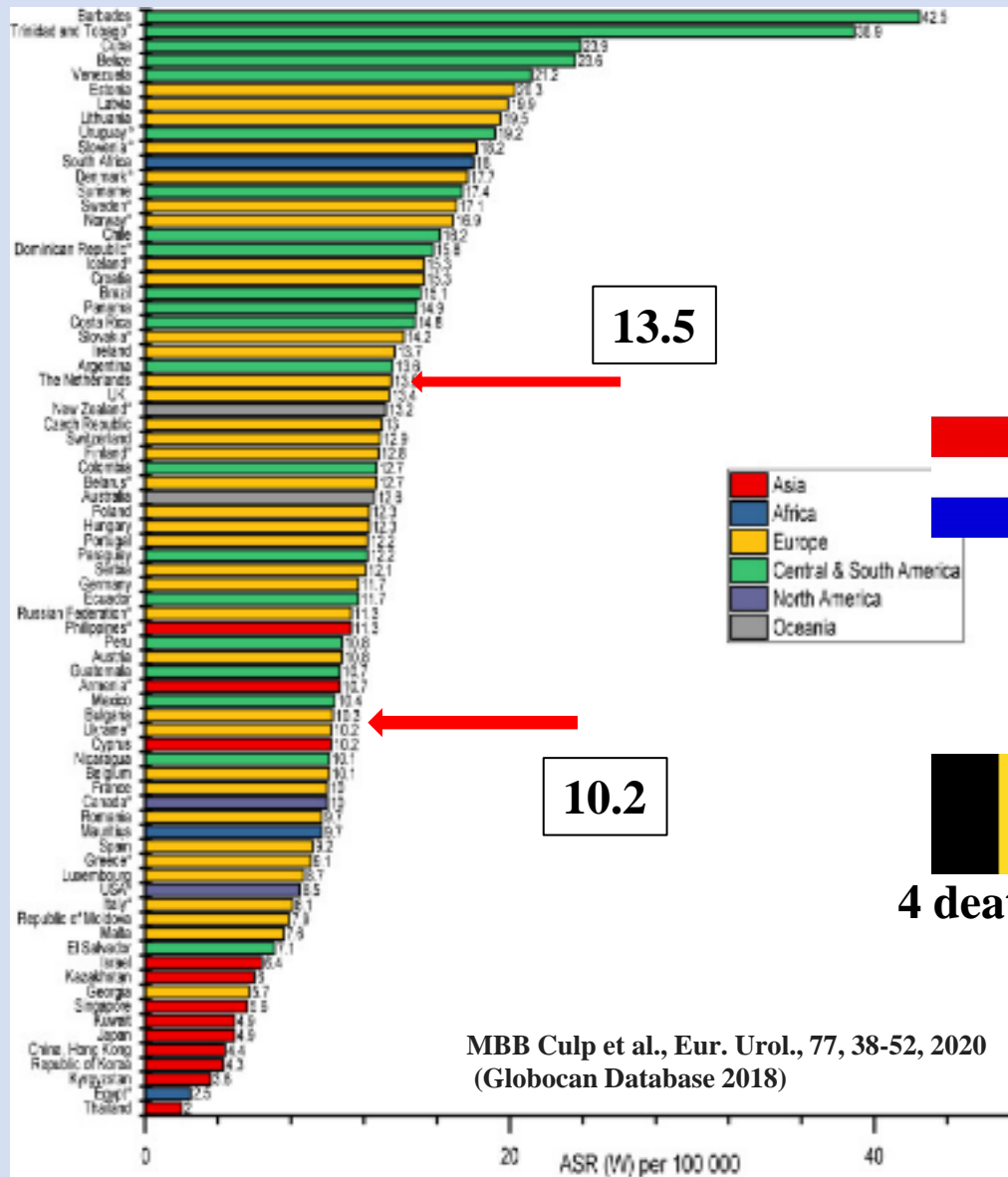
Stage T3 at diagnosis:

- 29% in 2008

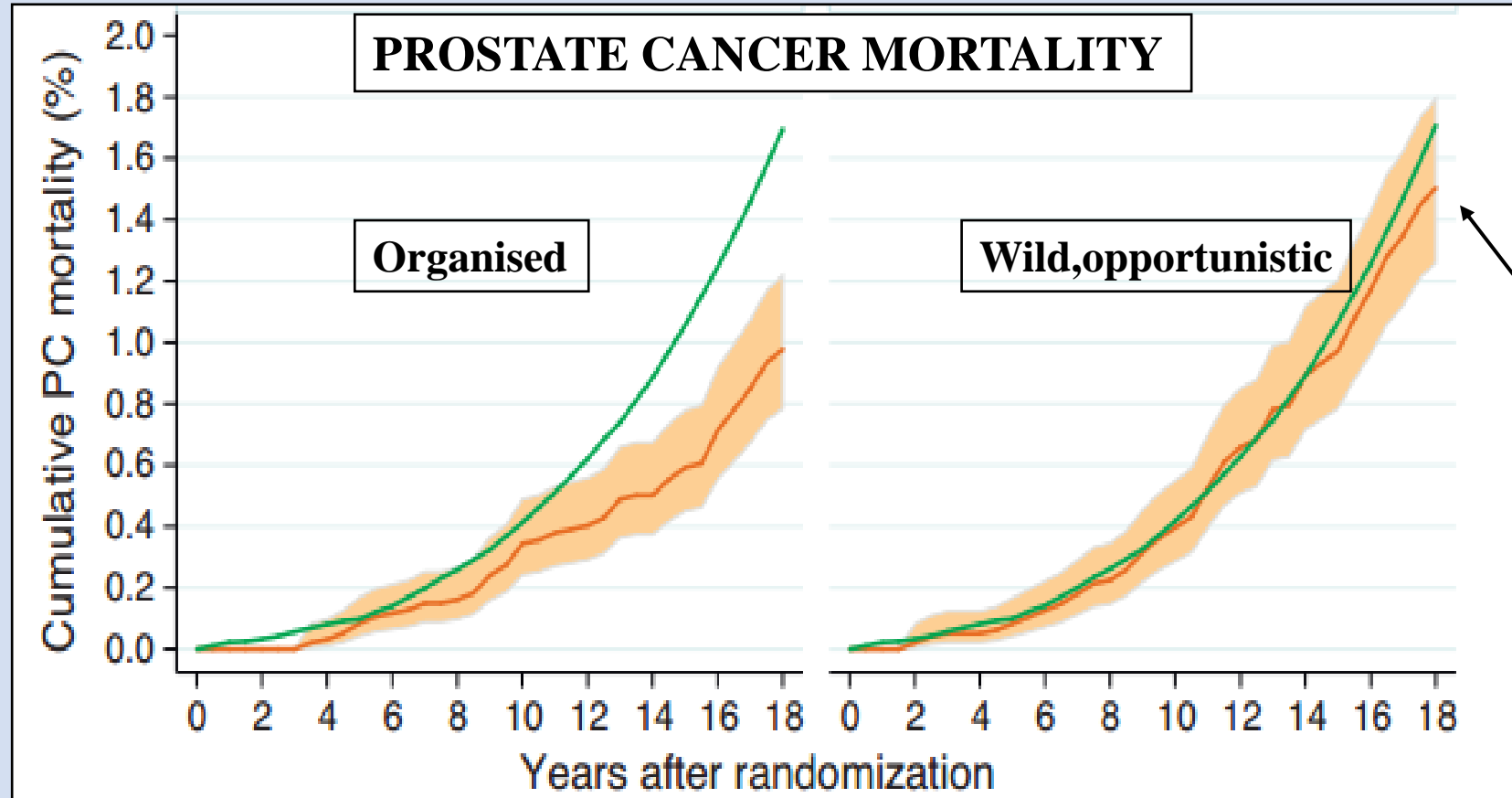
- 49% in 2017

**Today
Sweden: N°1**

PCa Mortality

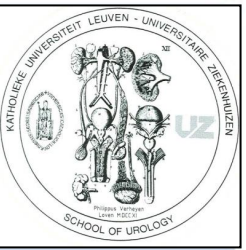


Wild screening (opportunistic) does not avoid overdiagnosis/overtreatment



- No effect
on PCa
mortality
- Costly

Arnsrud Godtman R, et al. Eur Urol. 2015;68(3):354-60



What has changed ?

1. We are able to avoid over diagnosis:

- Better use of PSA: age-related PSA, PSA Density
- Risk Calculators (PCPT and ERSPC) +/- Molecular Biomarkers
- mp (bp ?)MRI before biopsy

Mannaerts et al., EUO 2018

...decrease of number of biopsies

...detect more significant and less insignificant cancers

Amin et al., J. Urol. 2020

2. We reduce overtreatment:

- Active Surveillance in 65% of low & intermediate risk
- Nomograms MAP (age, PSA, Gl., MRI Vol., PIRADS, MRI ECE)

Lantz, EUO, 2022

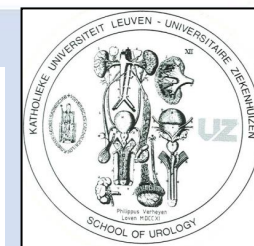




available at www.sciencedirect.com
journal homepage: www.europeanurology.com



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^{a,†,*}, Renée Hogenhout^{b,†}, Peter Albers^{c,d}, Roderick C.N. van den Bergh^e, Jelle O. Barentsz^{f,‡}, Monique J. Roobol^{b,‡}

Eur. Urol. 79 (2021) 327-329





available at www.sciencedirect.com
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European Association of Urology

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

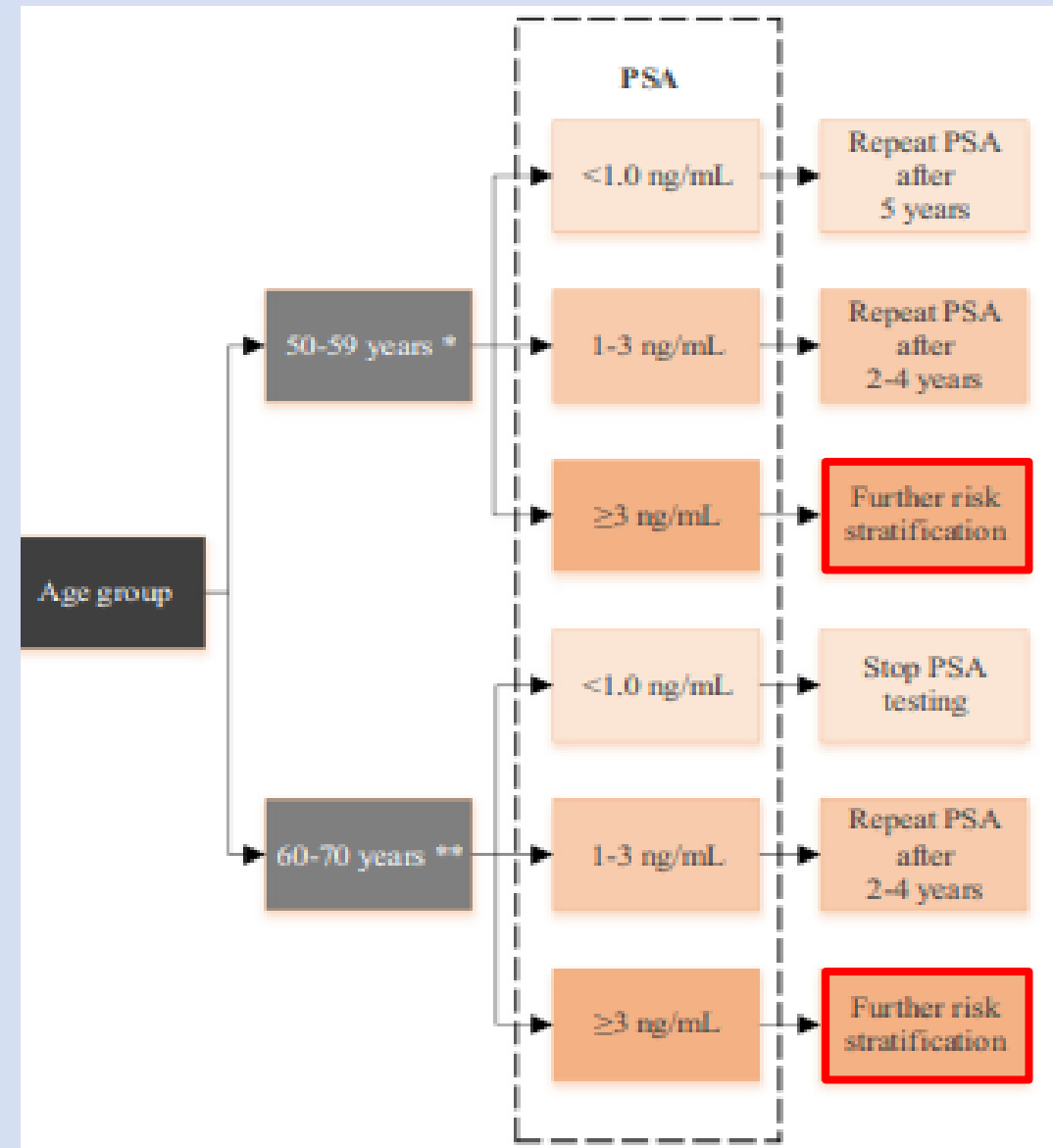
Hendrik Van Poppel^{a,†,*}, Renée Hogenhout^{b,†}, Peter Albers^{c,d}, Roderick C.N. van den Bergh^e, Jelle O. Barentsz^{f,‡}, Monique J. Roobol^{b,‡}



Early Detection in well informed men



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



Elevated PSA \neq Biopsy

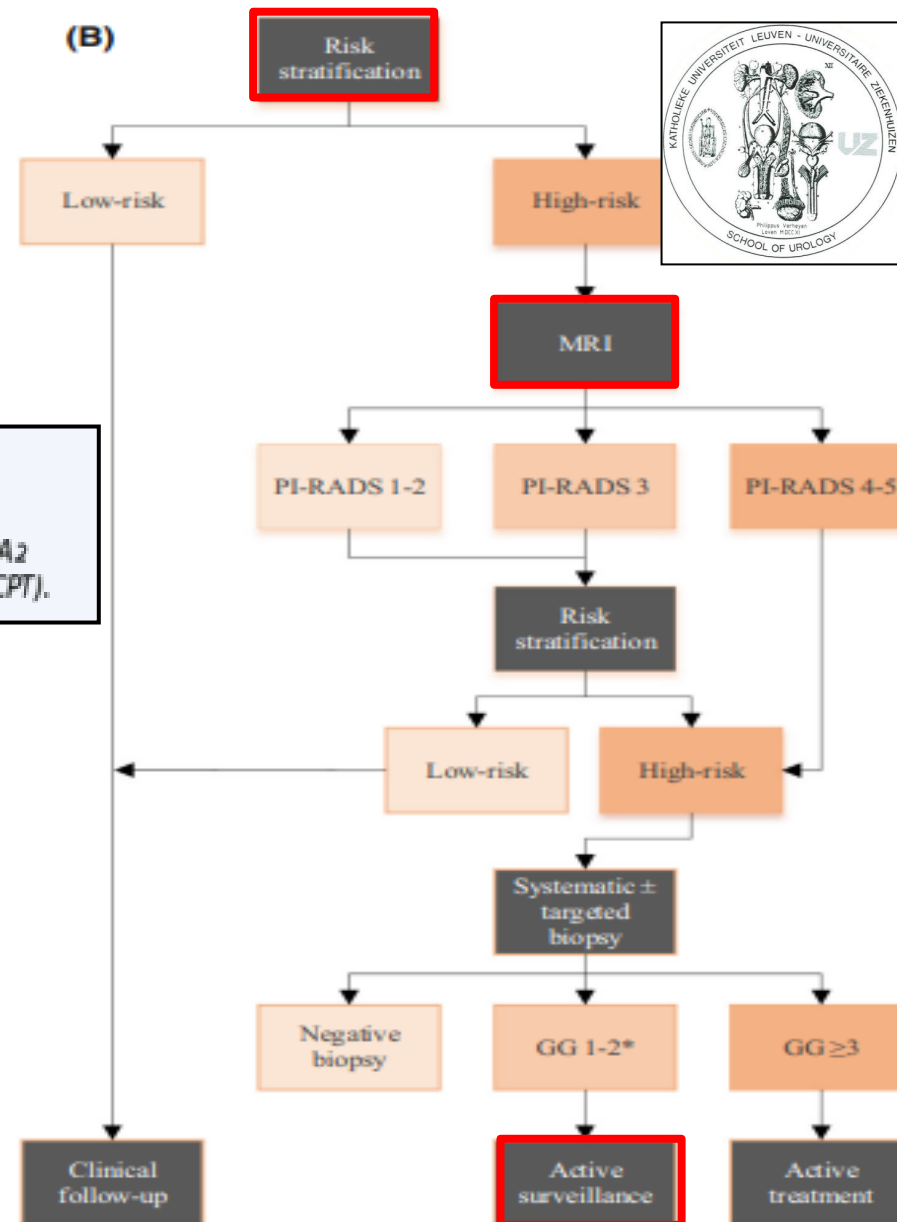
Risk Calculators

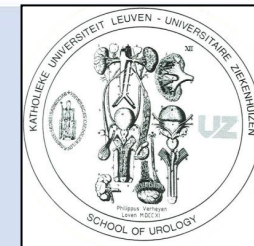


Free, quality controlled Risk Calculators available online:

- ERSPC: www.prostatecancer-riskcalculator.com
- PCPT: Myprostatecancerrisk.com
- Canada: www.prostaterisk.ca

- Once confirmed with 2-4 weeks interval.
- Eventually replaced by tri- or bi-parametric MRI.
- Family history, African-American origin, PSA density, BRCA2 gene mutation, nomograms/risk calculator (ERSPC and PCPT).



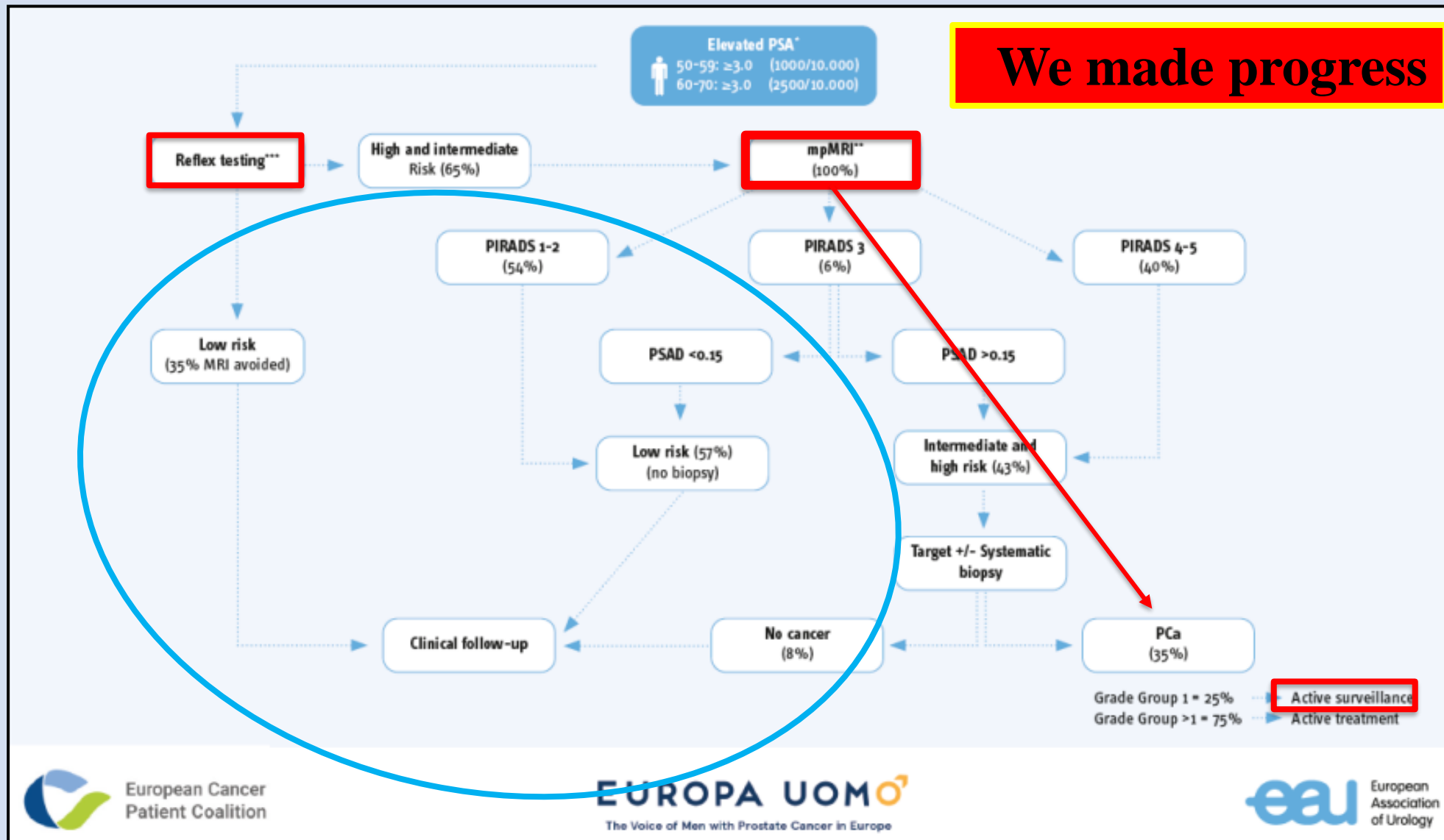


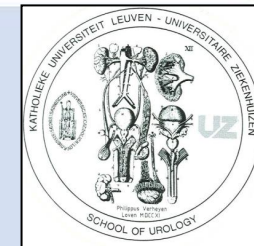
EAU Lobbying at European Parliament



2017, 2019 and 2020







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



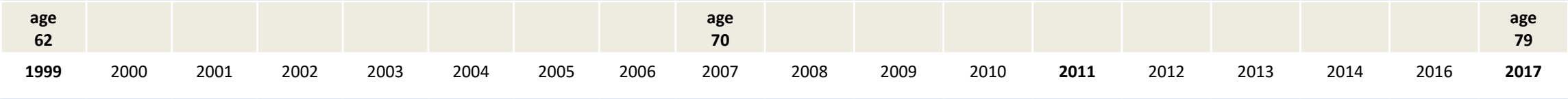
Relapse:
Radiotherapy
€5,000

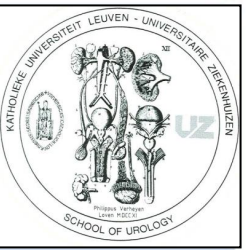


Medical Castration
€ 11,000

RadioLigands
Radium 223
Cabazitaxel
Enzalutamide
Docetaxel
Abiraterone
Denosumab

Palliative
Radiotherapy





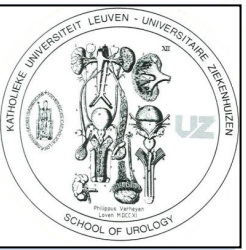
An Early Detection Strategy?

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 (€240,000)
4. Less PCa deaths > increased professional life spent
5. Better QoL





4 reasons to change things urgently

1. **Decrease Prostate Cancer Deaths (like Cx, Br. and CR).**
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



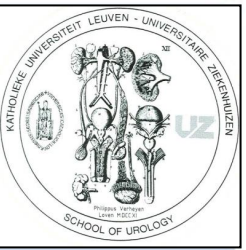
Europe's Beating Cancer Plan

EAU Policy

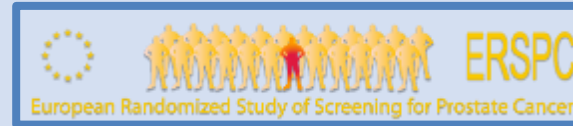




Policy : Prostate Cancer



- **>25 years after ERSPC**
- **>5 years of lobbying at European level, EP, EU, EC, Regions, ...**
- **After publications on PCa Screening in peer review journals**
- **After EAU Recommendations published in EU in 2021:**
 - *PSA ↑ = Biopsy (ERSPC) → Risk Assessment, MRI and AS*



What have we achieved?





Scientific Advice for Policy by European Academies



SAPEA brief summary on evidence presented in the 3 Cancer Screening Workshops

Rebecca Fitzgerald, Working Group Chair, University of Cambridge
Harry de Koning, Working Group Co-Chair, Erasmus MC, Rotterdam

SAPEA

Science Advice for Policy by European Academies

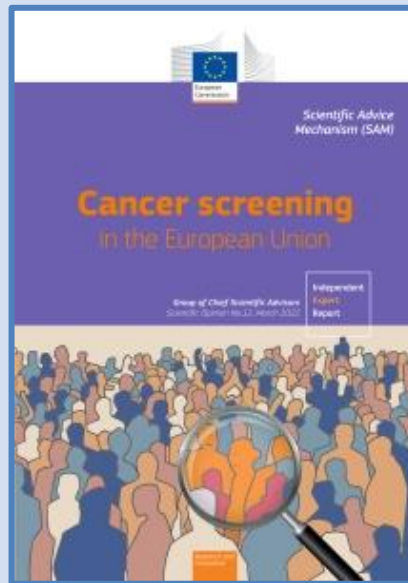
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 737432.

**European Commission's
Scientific
Advisory Mechanism**

SAM 20-01-2022

EU Beating Cancer Plan 2022

"Prostate cancer: There is strong scientific evidence for the benefits of organised prostate cancer screening using blood tests, particularly combined with follow-up MRI scans for men who have a positive blood test result."

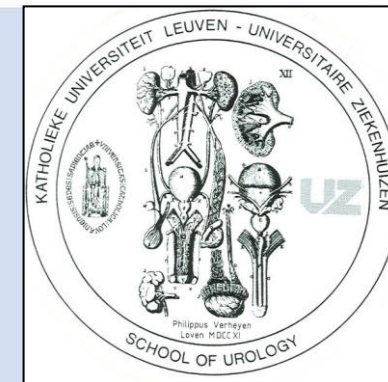


After the latest recommendation by the European Council on screening for Breast, Cervix and Colorectal in 2003...

"Extend screening programmes to prostate specific antigen (PSA)-based prostate cancer screening, in combination with additional MRI scanning as a follow-up test, as there is good evidence that screening with PSA testing can reduce deaths from prostate cancer."



Early Detection of Prostate Cancer



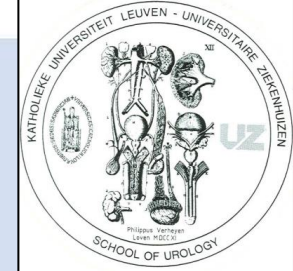
**What went wrong ?
Where are we since 2003 ?
Where are we since ECRSPC ?**

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

Back-up



Before PSA (Prostate Specific Antigen)

PSA=Blood test

Table IV. MORTALITY-INCIDENCE RATE RATIOS¹ IN 13 COUNTRIES DURING 1973-77 TO 1988-92

Countries	1973-77 ¹	1978-82	1983-87	1988-92
High risk				
U.S. blacks	0.35	0.33	0.39	0.25
U.S. whites				0.16
Canada				0.20
Sweden				0.38
Australia				0.33
France				0.36
Medium risk				
Denmark				0.60
England and Wales				0.57
Italy	0.46	0.53	0.45	0.41
Spain	0.70	0.61	0.47	0.48
Israel	0.48	0.46	0.48	0.38
Low risk				
Singapore	0.40	0.44	0.55	0.38
Japan	0.49	0.44	0.42	0.42
Hong Kong	0.41	0.39	0.36	0.35

**1 out of 2 to 3 PCa patients
died of their disease in the
pre-screening era**

¹ The ratio of mortality to incidence in each country, by time period.