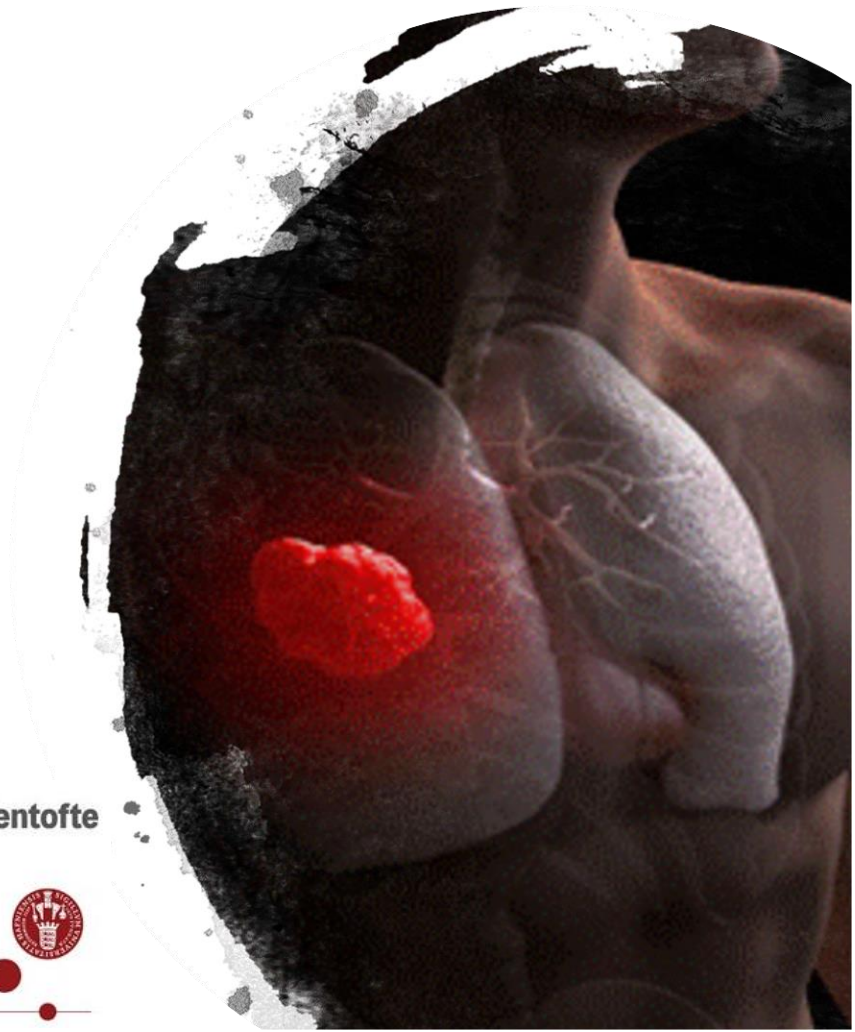
Screening for lungekræft

Dansk Cytologi Forening, Årsmøde2024

Vejle Sygehus



Zaigham Saghir

Speciallæge i Lungemedicin, Klinisk lektor, Ph.D,

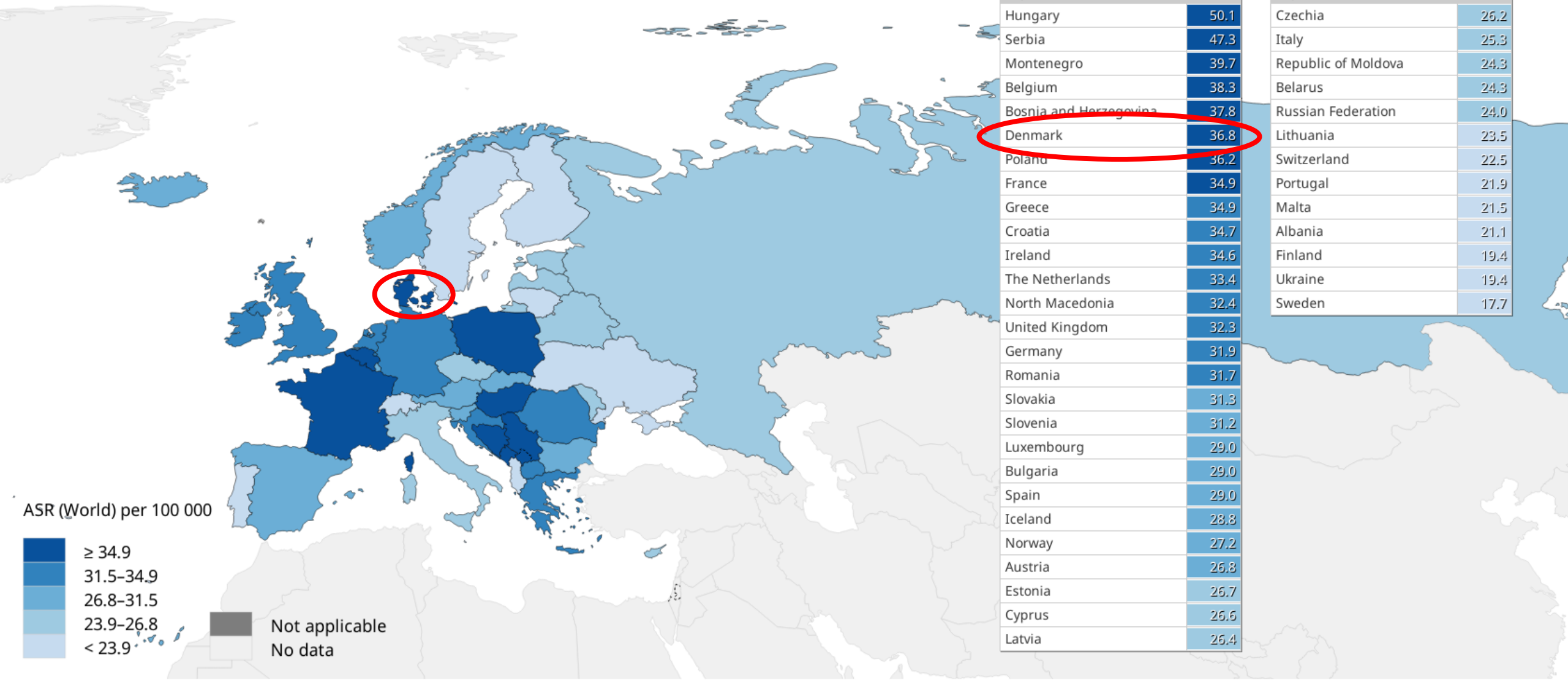
Formand, DLCG Screeningsgruppe

zaigham.saghir@regionh.dk

REGION Herlev og Gentofte Hospital

UNIVERSITY OF COPENHAGEN

Estimated age-standardized incidence rates (World) in 2020, lung, both sexes, all ages

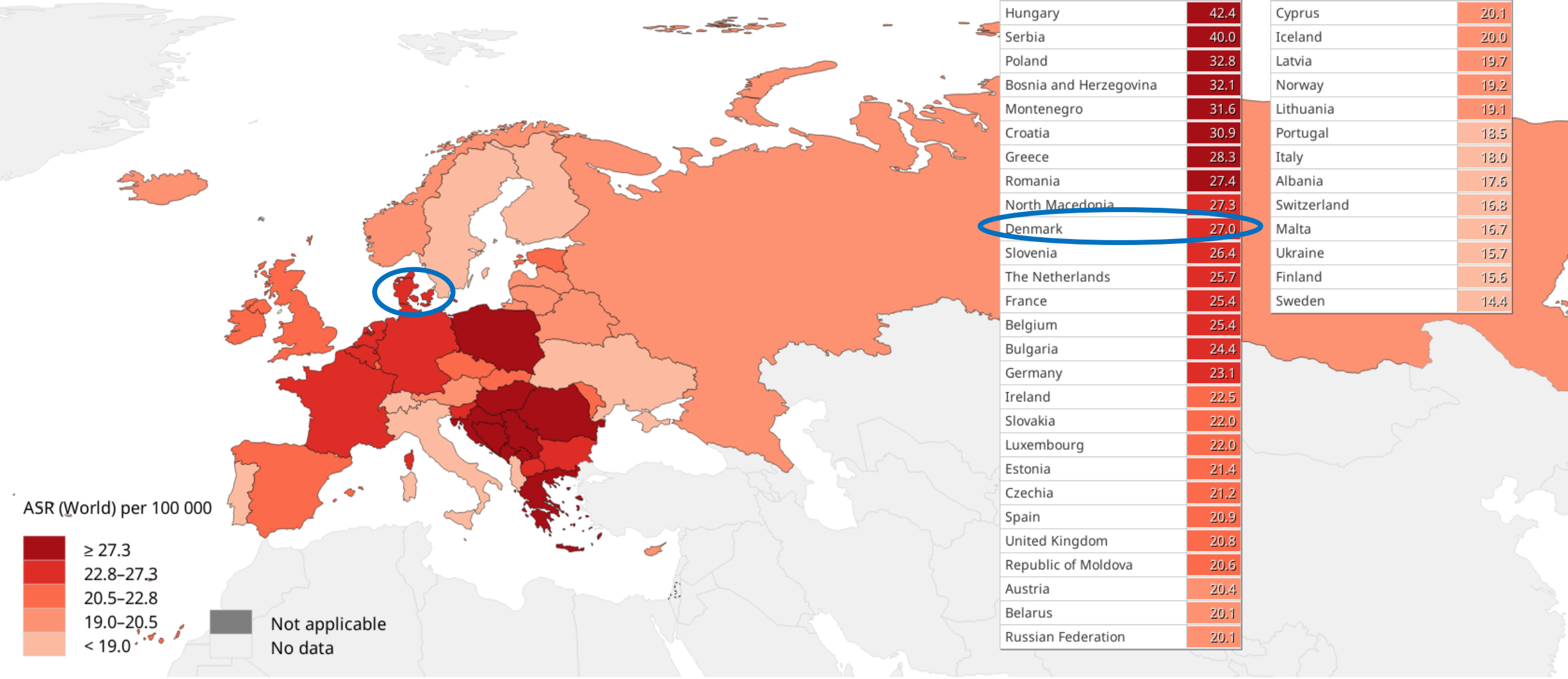


Population	ASR(W)
Hungary	50.1
Serbia	47.3
Montenegro	39.7
Belgium	38.3
Bosnia and Herzegovina	37.8
Denmark	36.8
Poland	36.2
France	34.9
Greece	34.9
Croatia	34.7
Ireland	34.6
The Netherlands	33.4
North Macedonia	32.4
United Kingdom	32.3
Germany	31.9
Romania	31.7
Slovakia	31.3
Slovenia	31.2
Luxembourg	29.0
Bulgaria	29.0
Spain	29.0
Iceland	28.8
Norway	27.2
Austria	26.8
Estonia	26.7
Cyprus	26.6
Latvia	26.4

Population	ASR(W)
Czechia	26.2
Italy	25.3
Republic of Moldova	24.3
Belarus	24.3
Russian Federation	24.0
Lithuania	23.5
Switzerland	22.5
Portugal	21.9
Malta	21.5
Albania	21.1
Finland	19.4
Ukraine	19.4
Sweden	17.7

Data source: GLOBOCAN 2020
Map production: IARC
(http://gco.iarc.fr/today)
World Health Organization

Estimated age-standardized mortality rates (World) in 2020, lung, both sexes, all ages



Population	ASR(W)
Hungary	42.4
Serbia	40.0
Poland	32.8
Bosnia and Herzegovina	32.1
Montenegro	31.6
Croatia	30.9
Greece	28.3
Romania	27.4
North Macedonia	27.3
Denmark	27.0
Slovenia	26.4
The Netherlands	25.7
France	25.4
Belgium	25.4
Bulgaria	24.4
Germany	23.1
Ireland	22.5
Slovakia	22.0
Luxembourg	22.0
Estonia	21.4
Czechia	21.2
Spain	20.9
United Kingdom	20.8
Republic of Moldova	20.6
Austria	20.4
Belarus	20.1
Russian Federation	20.1

Population	ASR(W)
Cyprus	20.1
Iceland	20.0
Latvia	19.7
Norway	19.2
Lithuania	19.1
Portugal	18.5
Italy	18.0
Albania	17.6
Switzerland	16.8
Malta	16.7
Ukraine	15.7
Finland	15.6
Sweden	14.4

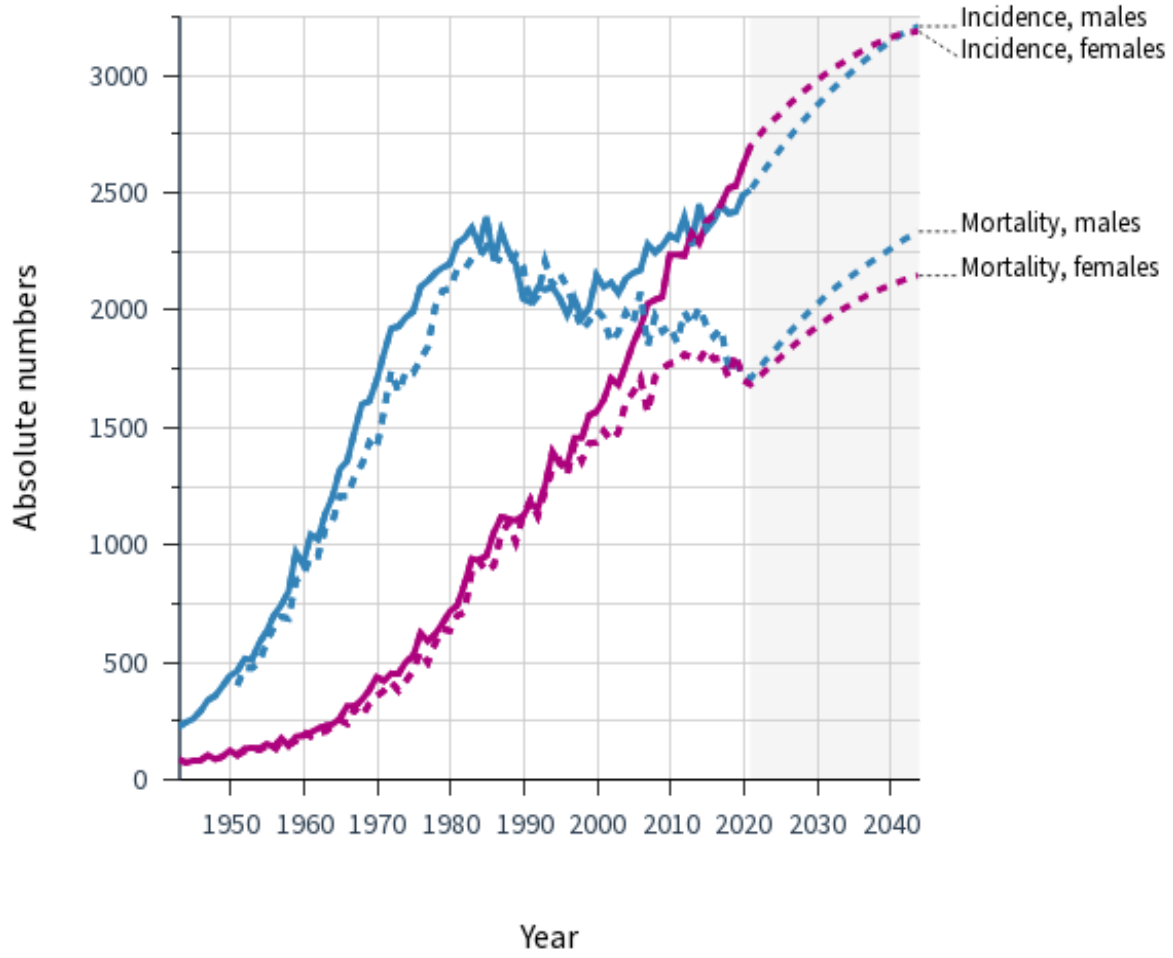
Data source: GLOBOCAN 2020
Map production: IARC
(http://gco.iarc.fr/today)
World Health Organization

Predicted absolute numbers, Incidence and Mortality, Males and Females

Lung

Denmark

Incidence Mortality



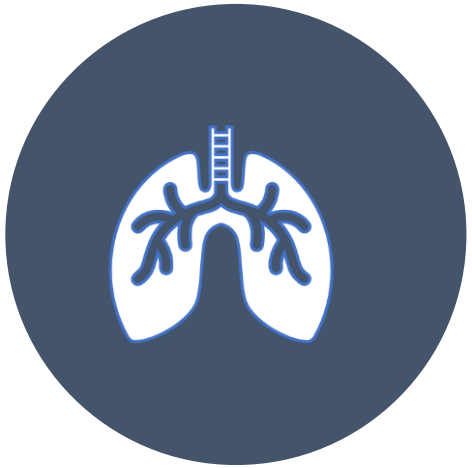
Method: constant

NORDCAN Association of the Nordic Cancer Registries

International Agency for Research on Cancer
World Health Organization

Problemet lungekræft

Hyppigst kræftform*



5182

Mænd og kvinder **(48%/52%)**

Diagnosticeret i 2022*

3425

Mænd og kvinder **(50%/50%)**

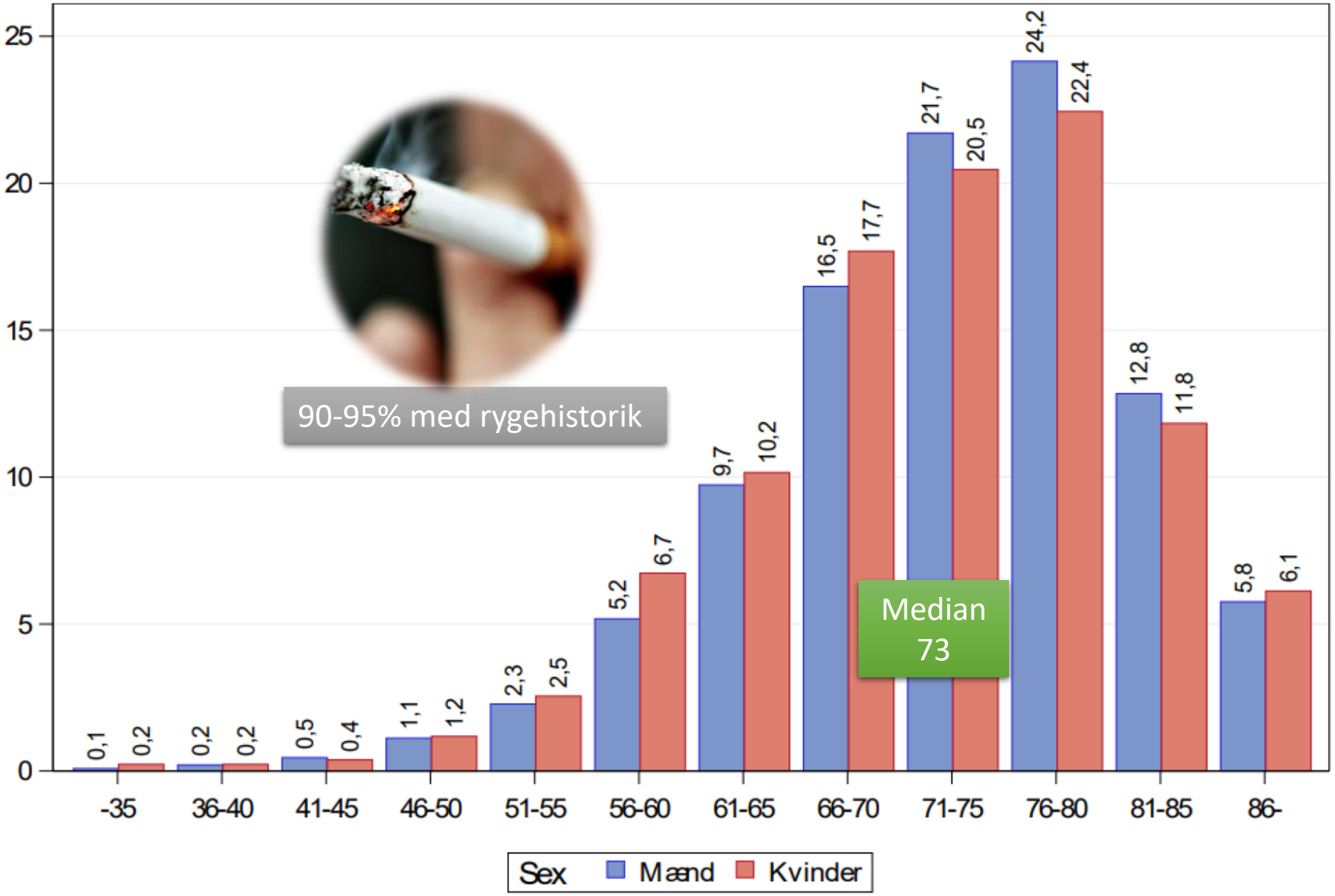
Døde af lungekræft 2022

– flest af alle kræftformer**

*The National Cancer Register, "Nye Kræfttilfælde i Danmark 2022", Nov 2023, Sundhedsdatastyrelsen), www.sundhedsdata.dk

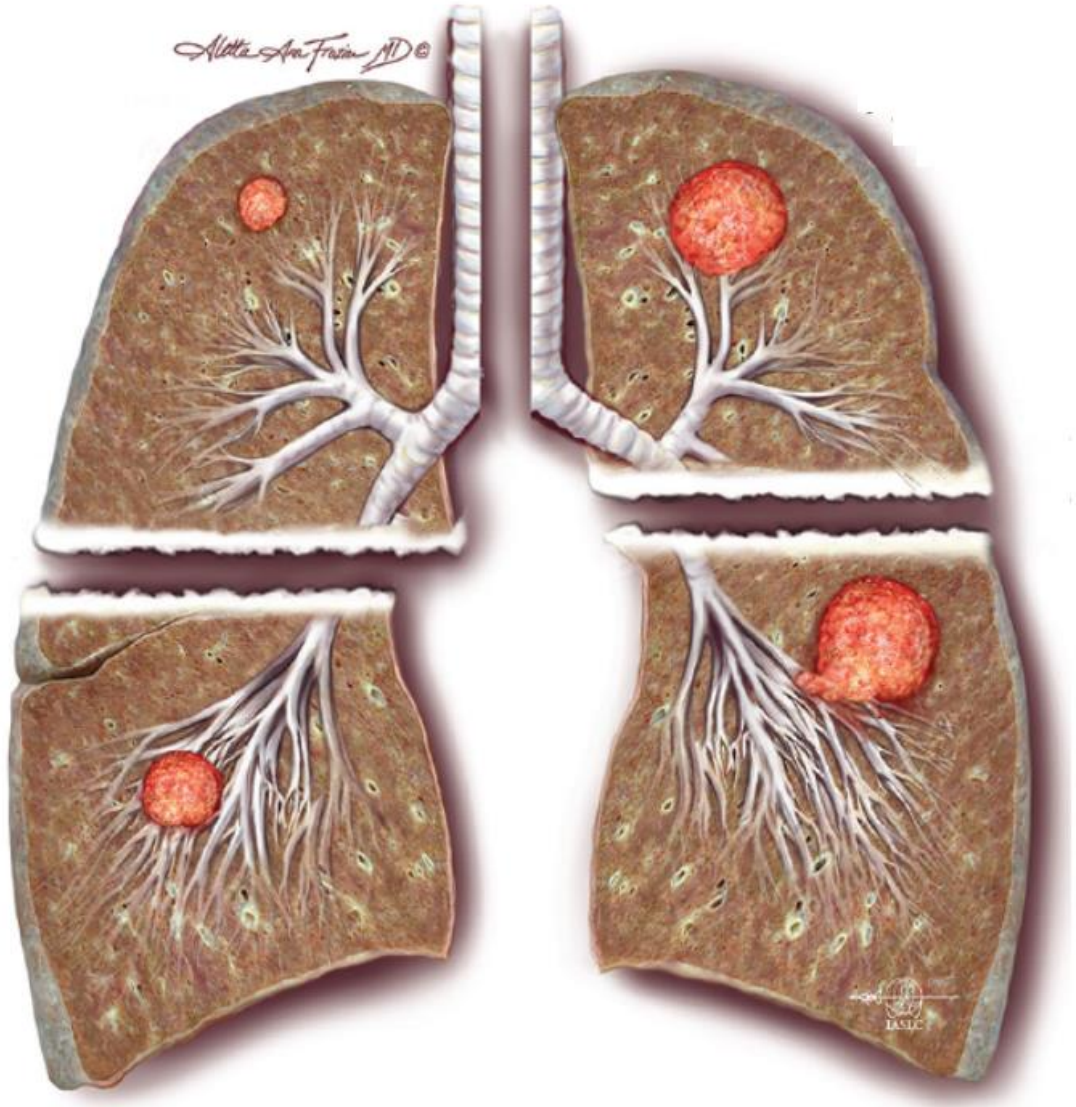
**The Causes of Death Register, https://www.esundhed.dk/Emner/Hvad-doer-vi-af/Doedsaarsager, Nov 2023, Sundhedsdatastyrelsen)

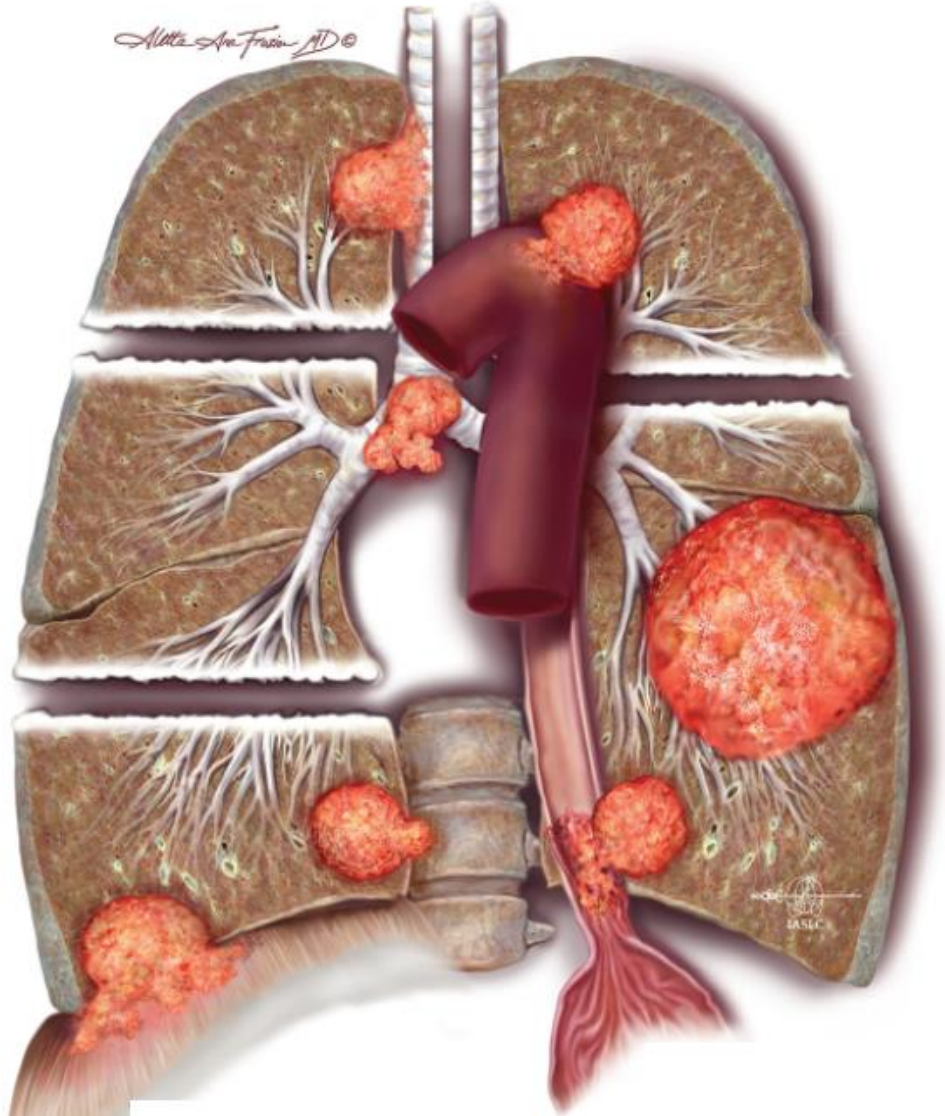
Figur 7.1.1.2 Alder- og kønsfordeling 2022 (%)



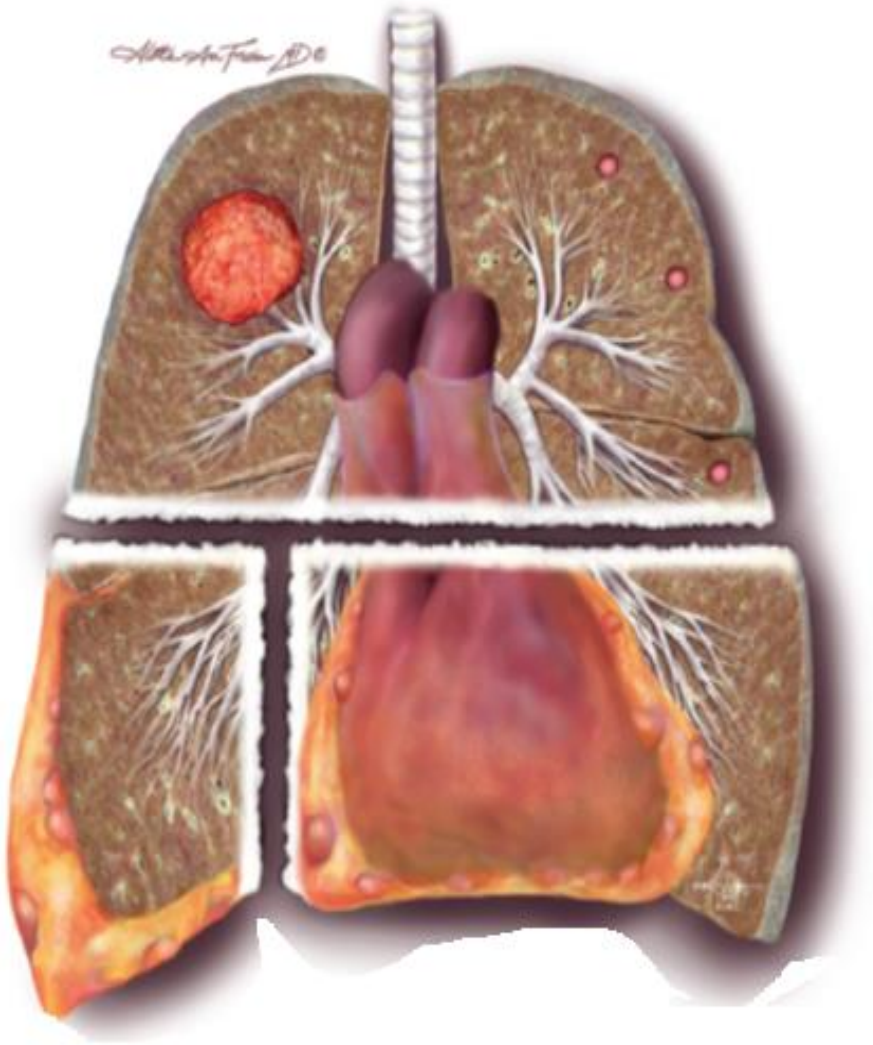
DLCR Årsrapport 2022 - https://www.lungecancer.dk/wp-content/uploads/2023/06/%C3%85rsrapport-2022-DLCR-offentlig.pdf - 28.02.24

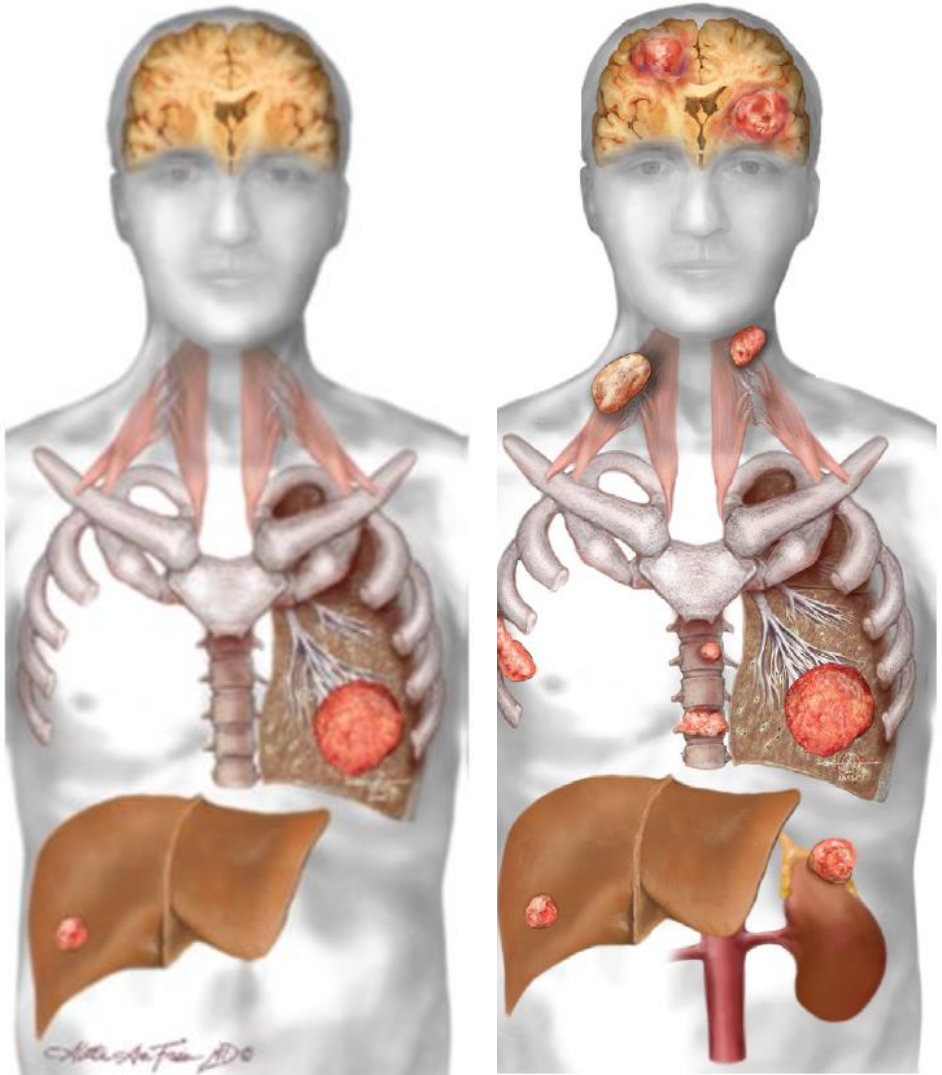
Tumorvækst





Metastatisk sygdom

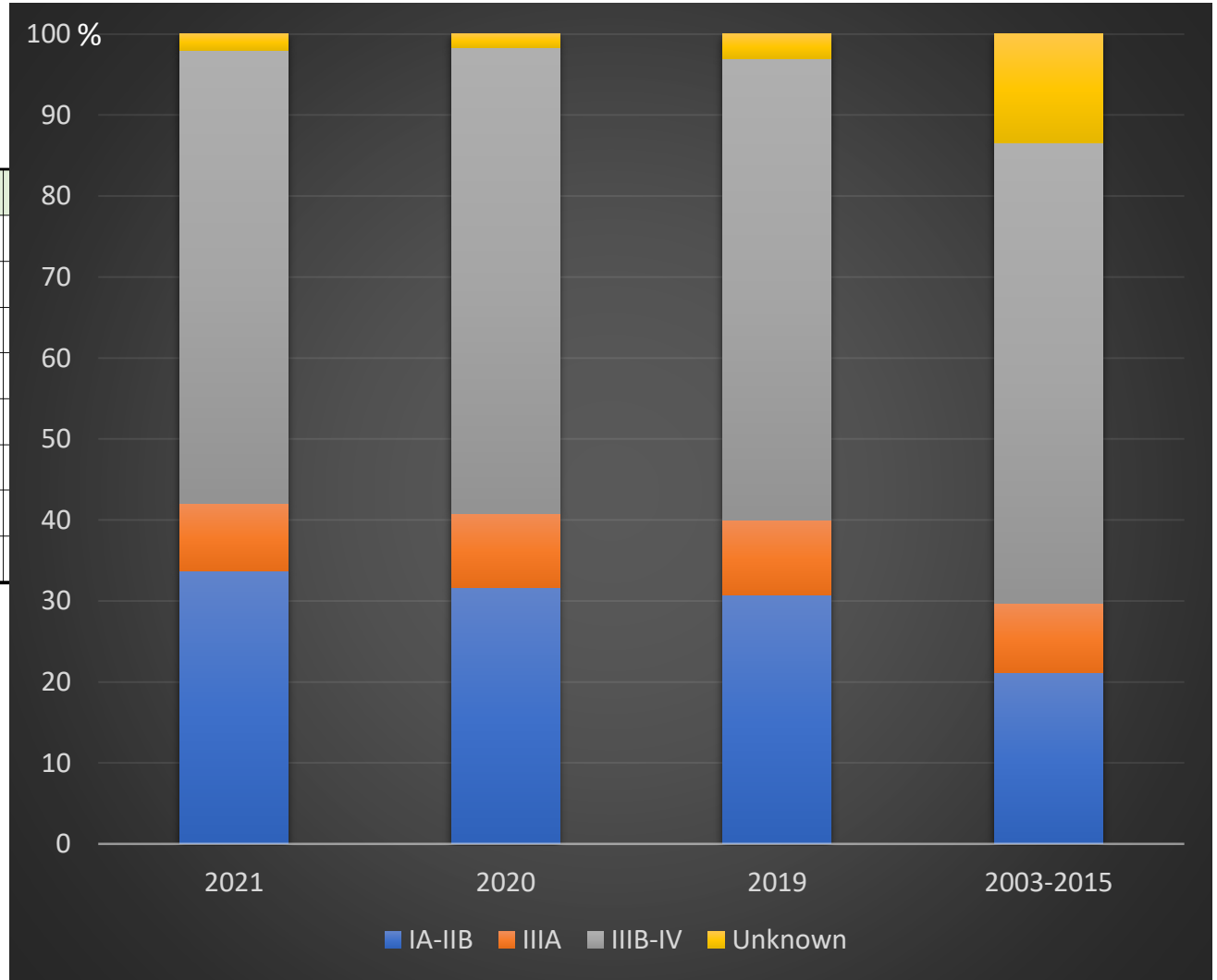




Stadiefordeling
Dansk Lunge Cancer Register 2003-2021

7.1.5.2a Tabel cTNM stadie fordeling i %

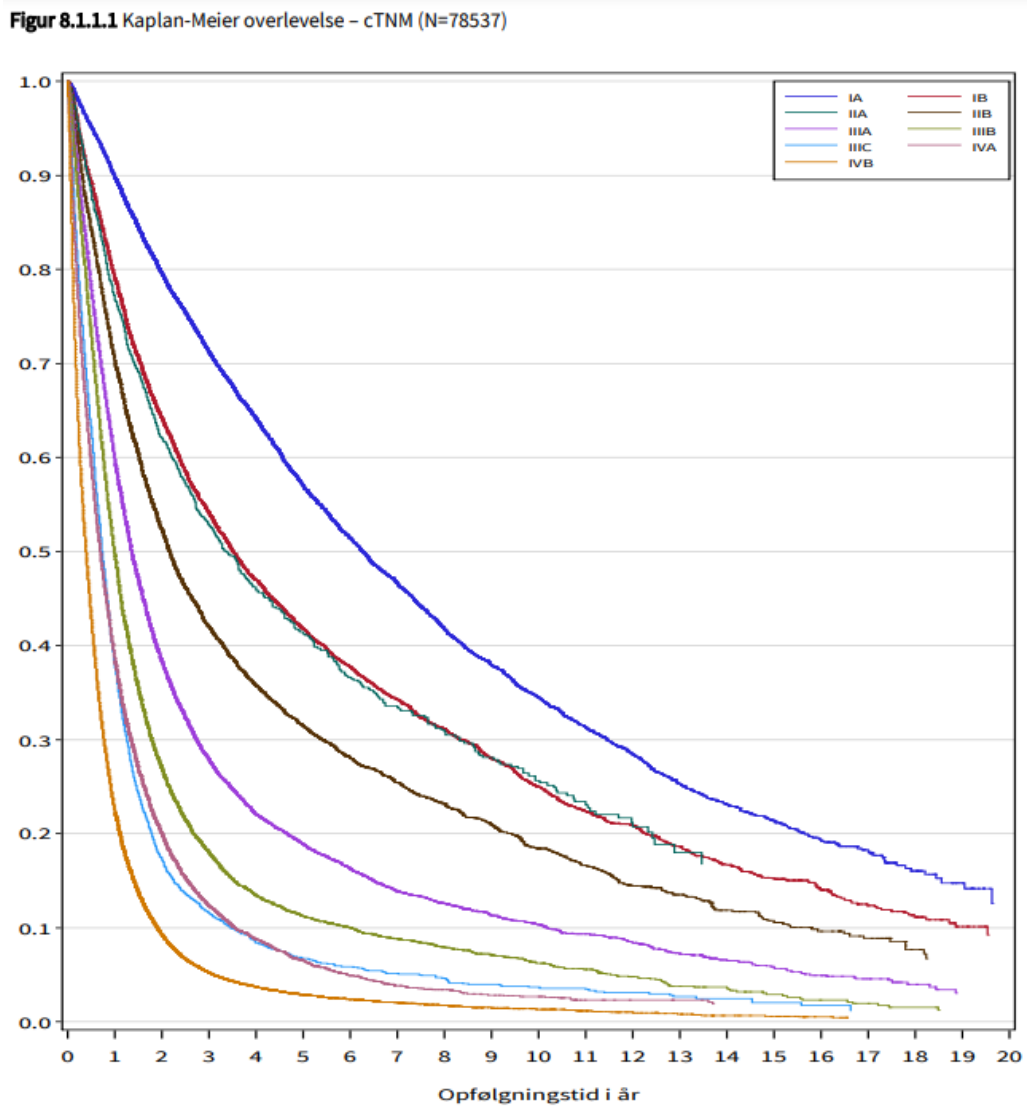
	I alt	IA-IIB	IIIA	IIIB-IVB
2021	4973	33.7	8.4	55.9
2020	4893	31.7	9.1	57.5
2019	4994	30.7	9.3	57.0
2018	4872	30.7	8.8	58.0
2017	4950	28.8	8.3	58.5
2016	4774	28.6	8.7	59.7
2003 - 2015	56292	21.2	8.5	56.9
Total	85748	24.5	8.6	57.2



DLCR Årsrapport 2022 - https://www.lungecancer.dk/wp-content/uploads/2023/06/%C3%85rsrapport-2022-DLCR-offentlig.pdf - 28.02.24

Overlevelse afhængig af stadie

Sygdomsstadier	2017
IA	57.2
IB	49.9
IIA	43.9
IIB	39.3
IIIA	24
IIIB	21.1
IIIC	14.3
IVA	11.3
IVB	5.2
Uoplyst	12.7
I alt (stadier)	22.3



DLCR Årsrapport 2022 - https://www.lungecancer.dk/wp-content/uploads/2023/06/%C3%85rsrapport-2022-DLCR-offentlig.pdf - 28.02.24

Overlevelse

Tabel 3.1.3: Resultater for indikator Ic for hele landet og efter patientens bopælsregion ved diagnose, 2014-2017

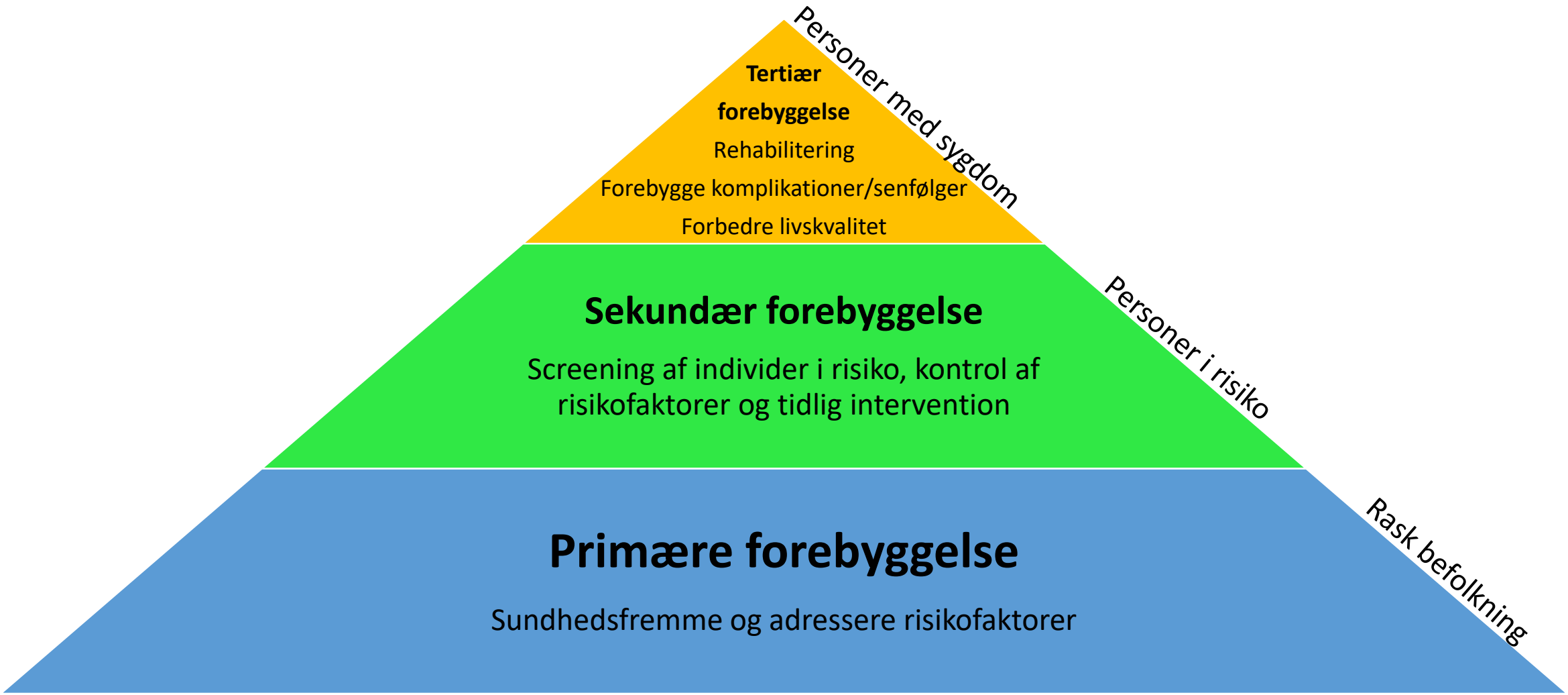
Indikator Ic_Bopæl: Andel af patienter, som overlever 5 år fra diagnosedato efter bopælsregion

	Standard		Uoplyst	Aktuelle år		Tidligere år		
	≥ 18%	Tæller/	antal	01.01.2017 - 31.12.2017		2016	2015	2014
	opfyldt	nævner	(%)	Andel	95% CI	Andel	Andel	Andel
Danmark	Ja	1.105 / 4.949	0 (0)	22,3	(21,2-23,5)	21,1	18,3	16,8
Hovedstaden	Ja	281 / 1.247	0 (0)	22,5	(20,2-25,0)	20,3	18,1	17,4
Sjælland	Nej	158 / 897	0 (0)	17,6	(15,2-20,3)	17,4	16,7	13,0
Syddanmark	Ja	271 / 1.167	0 (0)	23,2	(20,8-25,8)	21,0	20,1	16,1
Midtjylland	Ja	247 / 1.038	0 (0)	23,8	(21,2-26,5)	24,3	16,6	18,2
Nordjylland	Ja	148 / 600	0 (0)	24,7	(21,3-28,3)	22,5	20,5	20,6

Houston, we *still* have a problem.


LØSNINGER?
FOREBYGGELSE

Forebyggelsespyramiden




STOP SMOKING
NOW

Forslag kombinerer den primære og sekundære forebyggelse

Systematisk årlig screening af højrisiko grupper med lavdosis CT **inklusiv rygestopsintervention**

55-74 år

Rygere og tidligere rygere

>10cig/30år el. 15cig/25 år

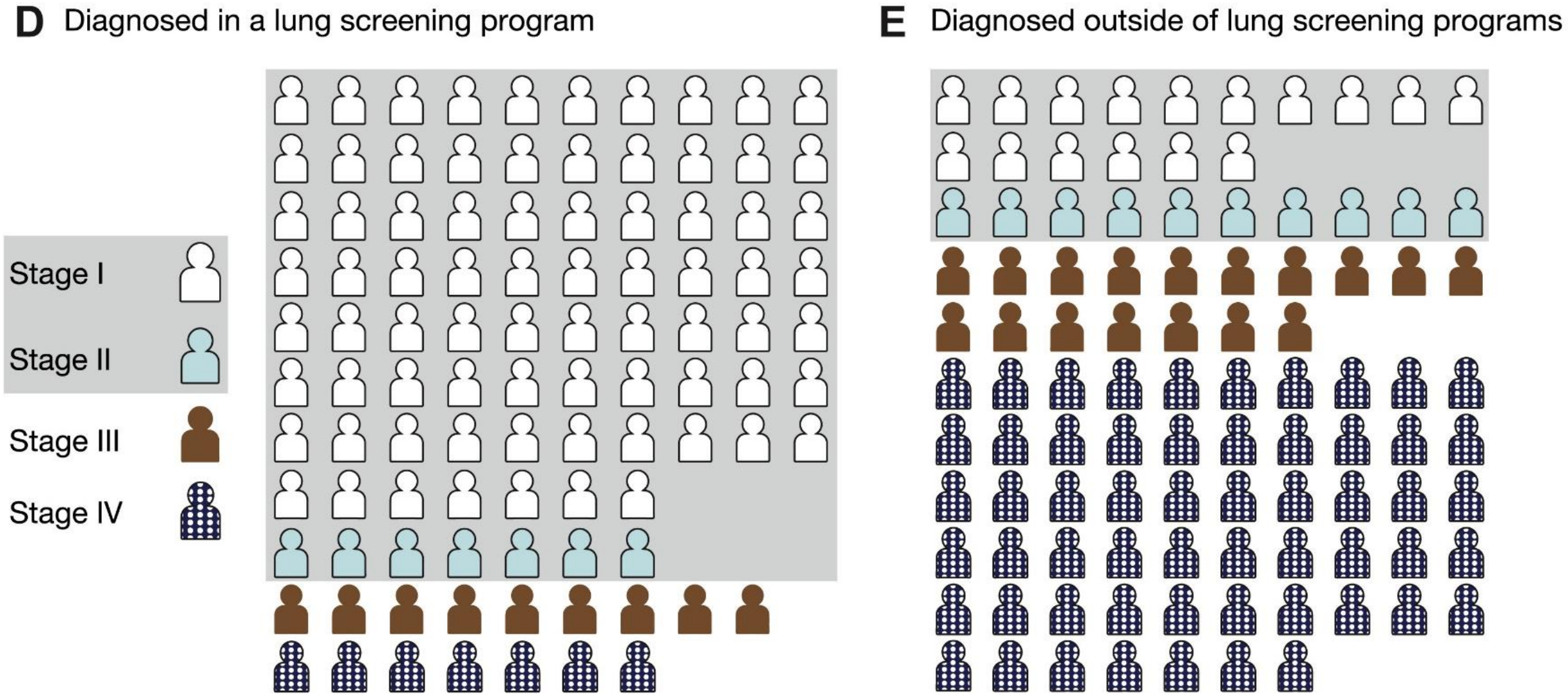
https://www.lungecancer.dk/wp-content/uploads/2021/05/Forslag-om-lungekr%C3%A6ftscreening_i_DK_22-01-2021.pdf

Gavnlige virkninger

Flere tidlige lungecancere detekteret

Færre fremskredne lungecancere

Reduktion i sygdomspecifik og total dødelighed



Adapted from:
Sands J, Tammemägi MC, Couraud S et al. Lung Screening Benefits and Challenges: A Review of The Data and Outline for Implementation. J Thorac Oncol. 2021 Jan;16(1):37-53.

Skadelige virkninger

Falsk positive fund – volumetri og forbedret risikostratificering af screeningsfund

Overdiagnostik – NELSON 19.7% efter 10 år - 8.9% efter 11 år.

Leadtime 9-12 år

Psykosociale konsekvenser – Potentielle negative korttidseffekter, som reduceres eller ikke kan ses over længere tid.

Tilfældige fund på CT – både i og uden for brystkassen – klare algoritmer for rapportering og håndtering af fund

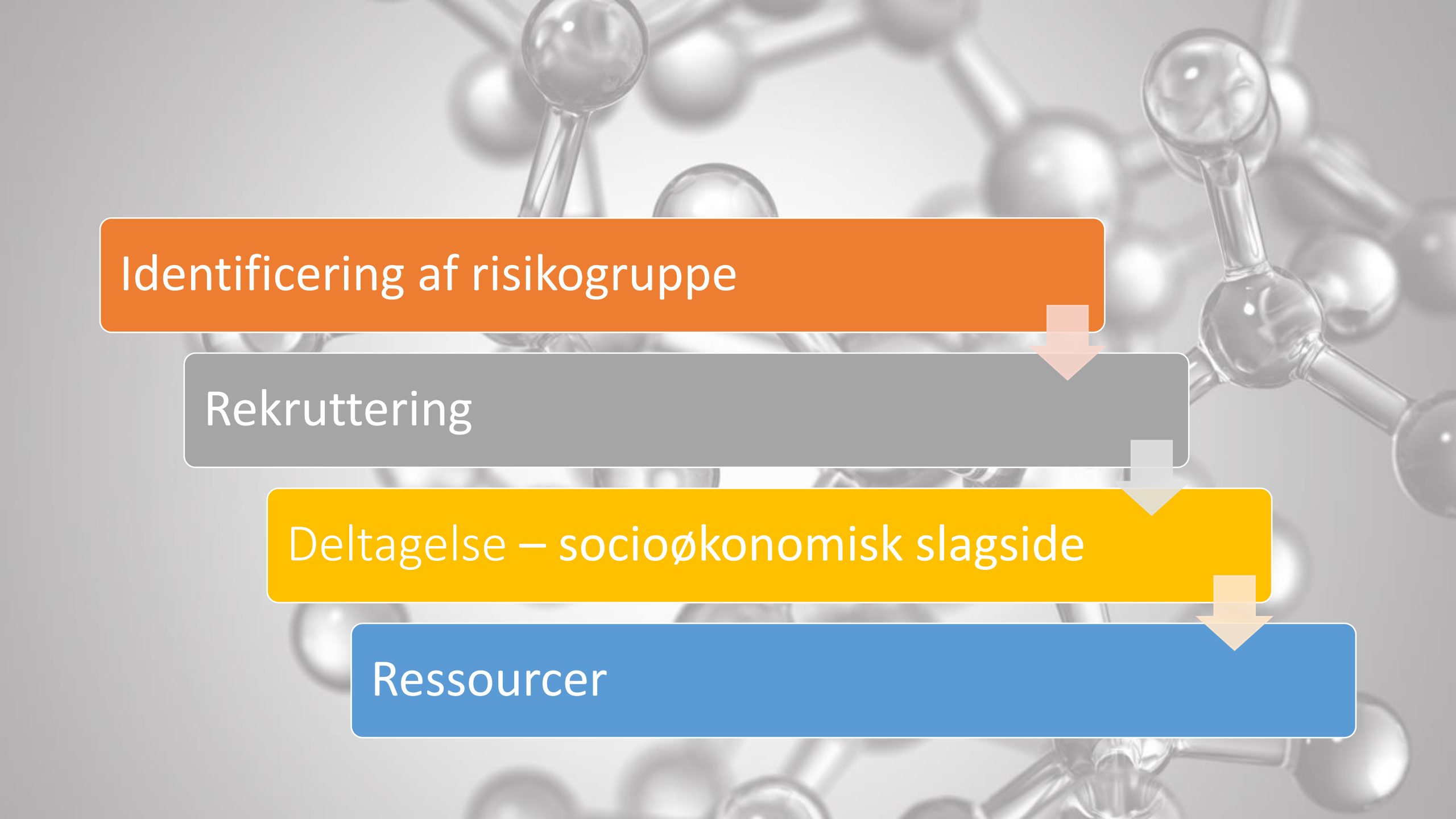
Stråledosis - 1 mSv: 15 lavdosis CT scanninger:

Forøgelse i livstidsrisiko for at dø af cancer med 0,075%

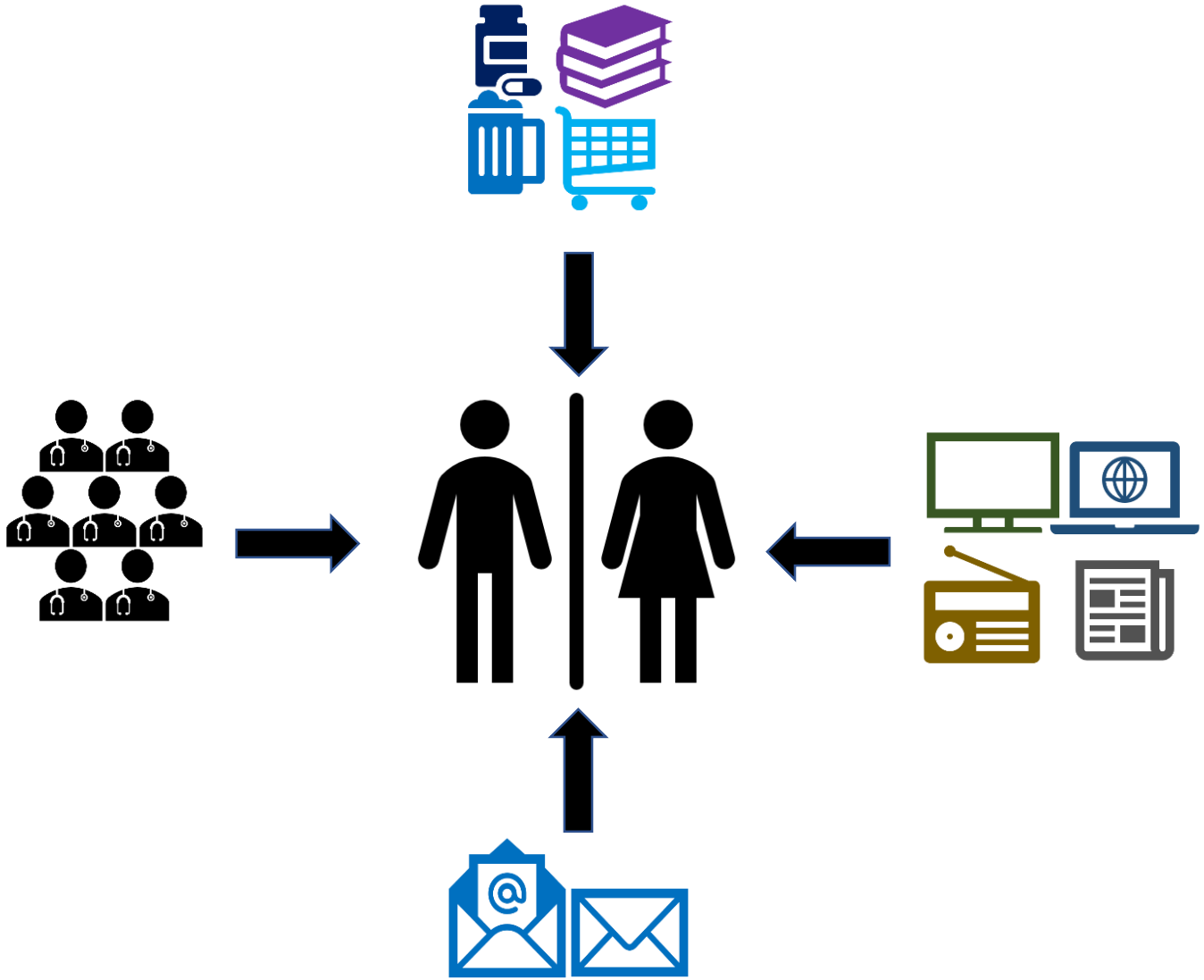
Bedre scannere = mindre stråling

Flere uafhængige studier med høj kvalitet og lang follow up viser klar effekt på stadieskift og lungekræft dødelighed

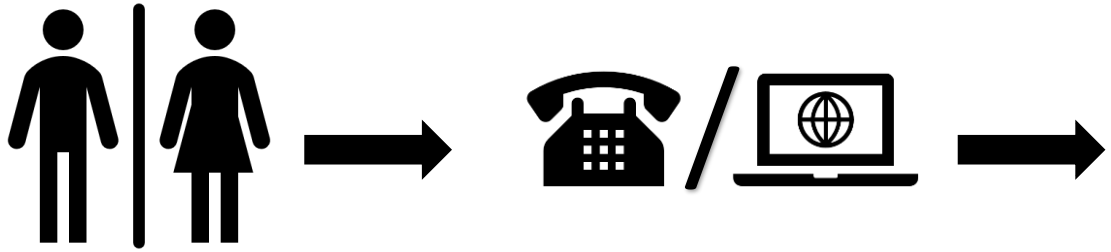
Alle internationale faglige selskaber som udreder og behandler lungecancer patienter anbefaler at forberede implementering.


Identificering af risikogruppe
Rekruttering
Deltagelse – socioøkonomisk slagside
Ressourcer

Rekruttering



Screeningsforløb

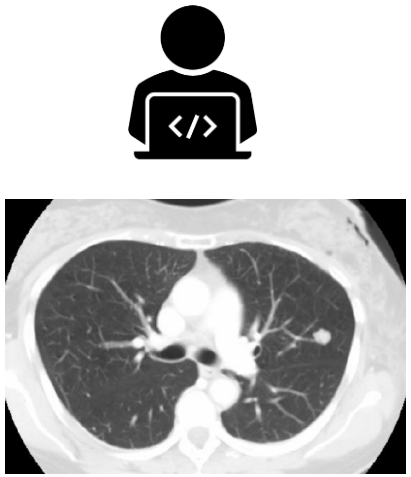


Præ-screening
Regional
Screeningsenhed
/egen læge

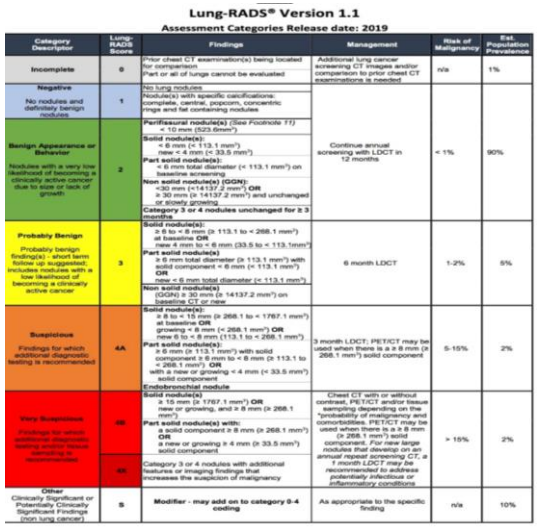
Kriterier opfyldt?

Kriterier opfyldt?

Screeningsforløb

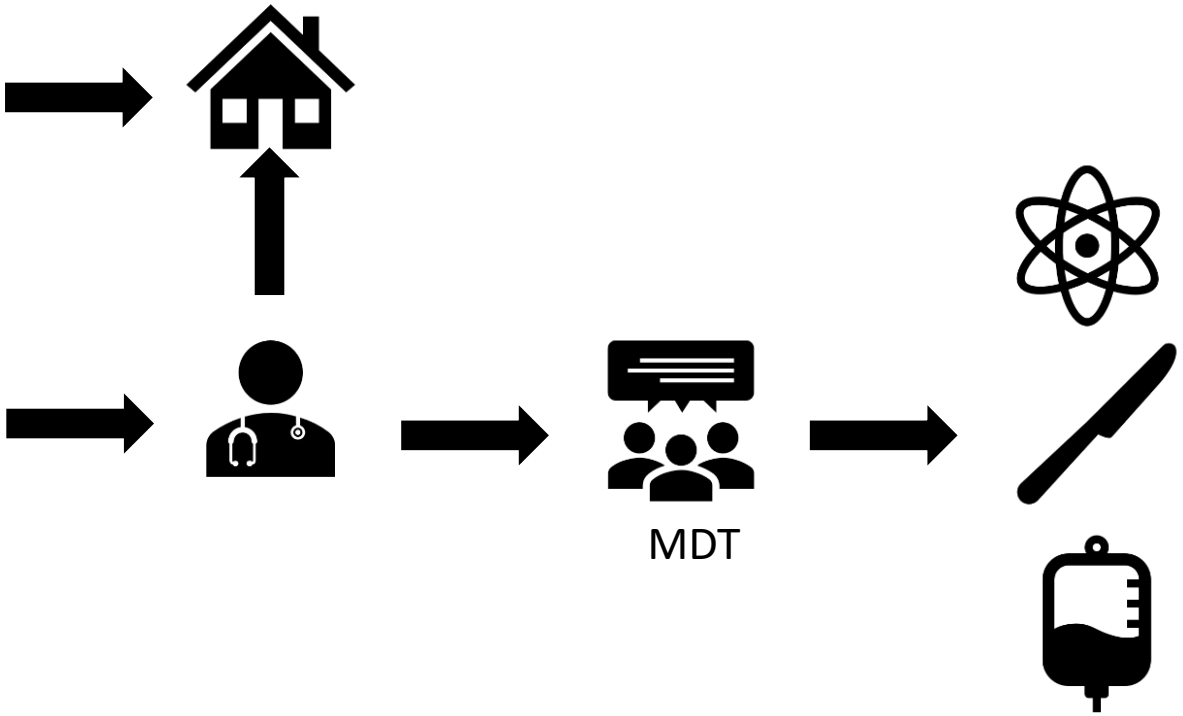


AI



Lung-RADS® Version 1.1
Assessment Categories Release date: 2019

Category Descriptor	Lung-RADS Score	Findings	Management	Risk of Malignancy	Est. Population Prevalence
Incomplete	0	Prior chest CT examination(s) being located for comparison Part or all of lungs cannot be evaluated	Additional lung cancer screening CT images and/or comparison to prior chest CT examinations is needed	n/a	1%
Negative No nodules and definitely benign nodules	1	No lung nodules Nodule(s) with specific calcifications: complete, central, popcorn, concentric rings and fat containing nodules	Continue annual screening with LDCT in 12 months	< 1%	90%
Benign Appearance or Behavior Nodules with a very low likelihood of becoming a clinically active cancer due to size or lack of growth	2	**Perifissural nodule(s)** *(See Footnote 11)* < 10 mm (523.6mm³) **Solid nodule(s):** < 6 mm (< 113.1 mm³) new < 4 mm (< 33.5 mm³) **Part solid nodule(s):** < 6 mm total diameter (< 113.1 mm³) on baseline screening **Non solid nodule(s) (GGN):** <30 mm (<14137.2 mm³) **OR** ≥ 30 mm (≥ 14137.2 mm³) and unchanged or slowly growing **Category 3 or 4 nodules unchanged for ≥ 3 months**			
Probably Benign Probably benign finding(s) - short term follow up suggested; includes nodules with a low likelihood of becoming a clinically active cancer	3	**Solid nodule(s):** ≥ 6 to < 8 mm (≥ 113.1 to < 268.1 mm³) at baseline **OR** new 4 mm to < 6 mm (33.5 to < 113.1mm³) **Part solid nodule(s)** ≥ 6 mm total diameter (≥ 113.1 mm³) with solid component < 6 mm (< 113.1 mm³) **OR** new < 6 mm total diameter (< 113.1 mm³) **Non solid nodule(s)** (GGN) ≥ 30 mm (≥ 14137.2 mm³) on baseline CT or new	6 month LDCT	1-2%	5%
Suspicious Findings for which additional diagnostic testing is recommended	4A	**Solid nodule(s):** ≥ 8 to < 15 mm (≥ 268.1 to < 1767.1 mm³) at baseline **OR** growing < 8 mm (< 268.1 mm³) **OR** new 6 to < 8 mm (113.1 to < 268.1 mm³) **Part solid nodule(s):** ≥ 6 mm (≥ 113.1 mm³) with solid component ≥ 6 mm to < 6 mm (≥ 113.1 to < 268.1 mm³) **OR** with a new or growing < 4 mm (< 33.5 mm³) solid component **Endobronchial nodule**	3 month LDCT; PET/CT may be used when there is a ≥ 8 mm (≥ 268.1 mm³) solid component	5-15%	2%
Very Suspicious Findings for which additional diagnostic testing and/or tissue sampling is recommended	4B	**Solid nodule(s)** ≥ 15 mm (≥ 1767.1 mm³) **OR** new or growing, and ≥ 8 mm (≥ 268.1 mm³) **Part solid nodule(s) with:** a solid component ≥ 8 mm (≥ 268.1 mm³) **OR** a new or growing ≥ 4 mm (≥ 33.5 mm³) solid component	Chest CT with or without contrast, PET/CT and/or tissue sampling depending on the *"probability of malignancy and comorbidities. PET/CT may be used when there is a ≥ 8 mm (≥ 268.1 mm³) solid component. For new large nodules that develop on an annual repeat screening CT, a 1 month LDCT may be recommended to address potentially infectious or inflammatory conditions*	> 15%	2%
	4X	Category 3 or 4 nodules with additional features or imaging findings that increases the suspicion of malignancy			
Other Clinically Significant or Potentially Clinically Significant Findings (non lung cancer)	S	**Modifier - may add on to category 0-4 coding**	As appropriate to the specific finding	n/a	10%



MDT

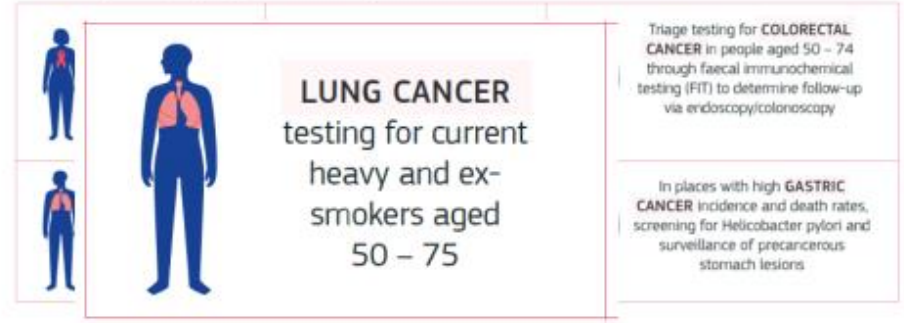
Med systematisk screening af højrisikogrupper ser vi et stort potentiale for at formindske sygdomsbyrde og dødelighed af lungecancer

Behov for MTV inkl. sundhedsøkonomisk analyse

Behov for pilotfase med nationale implementeringsprojekter

WHAT ARE THE NEW EU RECOMMENDATIONS?

Extending access to targeted cancer screening for breast, colorectal and cervical cancers along with a step-by-step approach to introducing prostate, lung and gastric cancer testing.



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MEDIA RELEASE

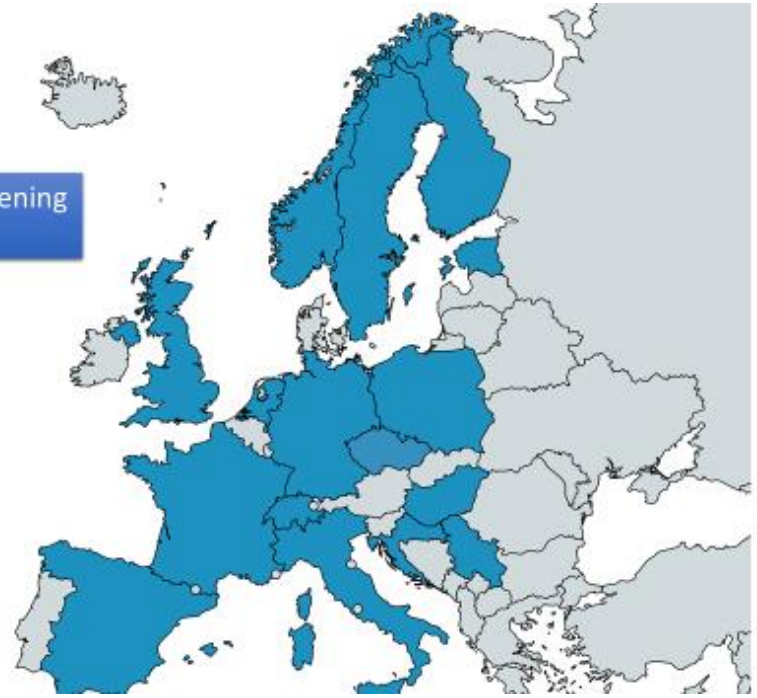
MSAC recommendation takes Australia one step closer to a national lung cancer screening program

13 October 2022

A- A+

Medical Services Advisory Committee recommends implementation of a national lung cancer screening

Pilotprojekter/screening
Europa 2022



Organisations: UK National Screening Committee

UK NSC recommends introduction of targeted lung cancer screening

Mike Harris, 29 September 2022 - General

INDLAND

Sundhedsministeren giver grønt lys til at afprøve lungekræftscreening i Danmark

De danske lungelæger er begejstrede over udsigten til at komme i gang med at teste screening.

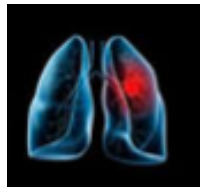
Sundhedsminister Sophie Løhde vil sammen med regeringen finde de 30 millioner, et pilotprojekt vil koste. Derefter skal der tages stilling til, om screening nationalt er en god idé.
(Foto: © liselotte sabroe, Ritzau Scanpix)

LÆS OP ORDBOG TEKST

DLCG Screeninggruppe

DSKFN

DaLuPa



DOLG

DFLK

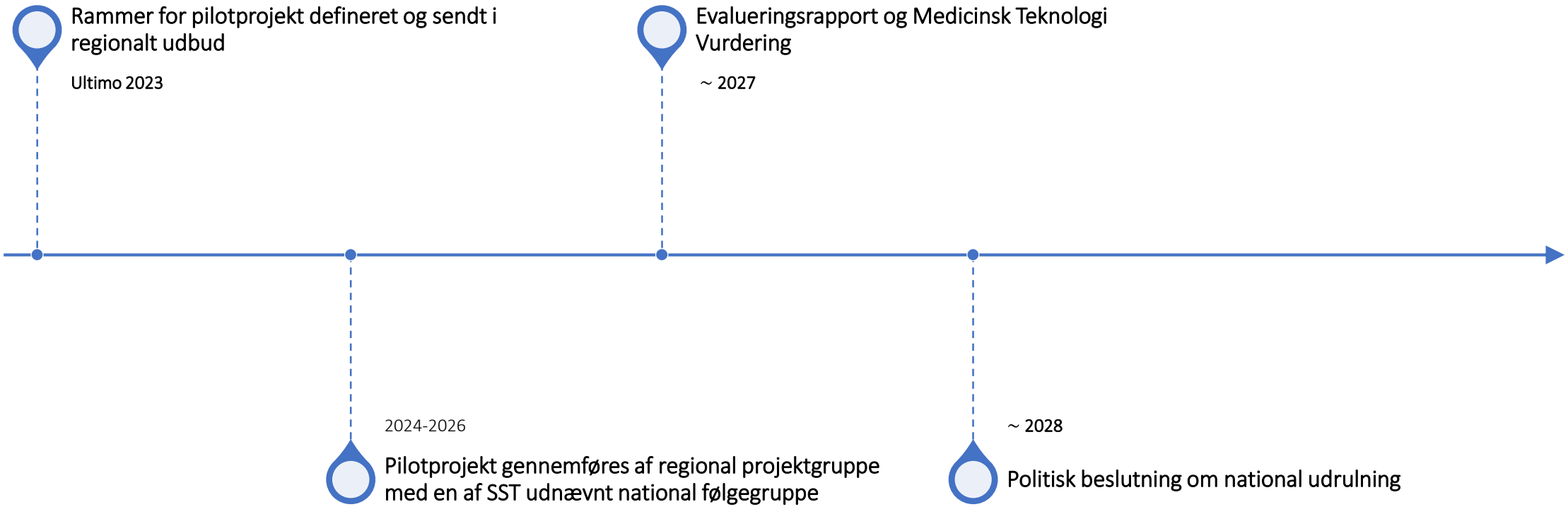
DTS

THORAS

DLS

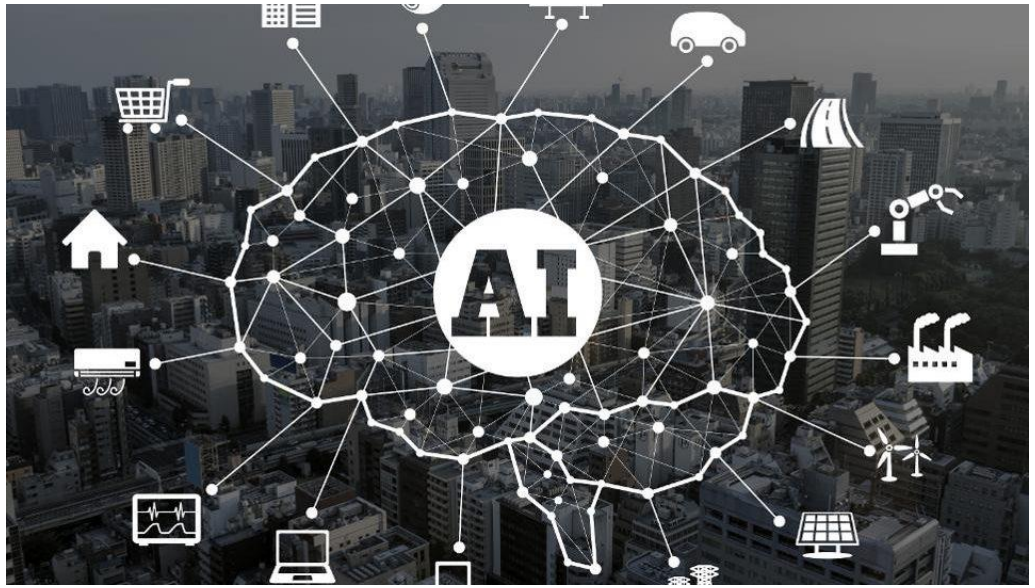
Kræftens Bekæmpelse

Patientforeningen Lungekræft


Rammer for pilotprojekt defineret og sendt i regionalt udbud
Ultimo 2023
Evalueringsrapport og Medicinsk Teknologi Vurdering
~ 2027
2024-2026
Pilotprojekt gennemføres af regional projektgruppe med en af SST udnævnt national følgegruppe
~ 2028
Politisk beslutning om national udrulning

Regional pilotprojekt – Region Syddanmark 2024-2026


Let's Quit Together.
Are you or a loved one ready to quit?
Start Today


AI


8 ml
STERILE

Tak for opmærksomheden!