

# Informatienamiddag Prolong Long(vlies)kanker : van diagnose tot behandeling

Dr Griet Deslypere

Dr Jonas Claus

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Staf Versluys Bredene



# Inhoudstafel

Epidemiologie

Symptomen

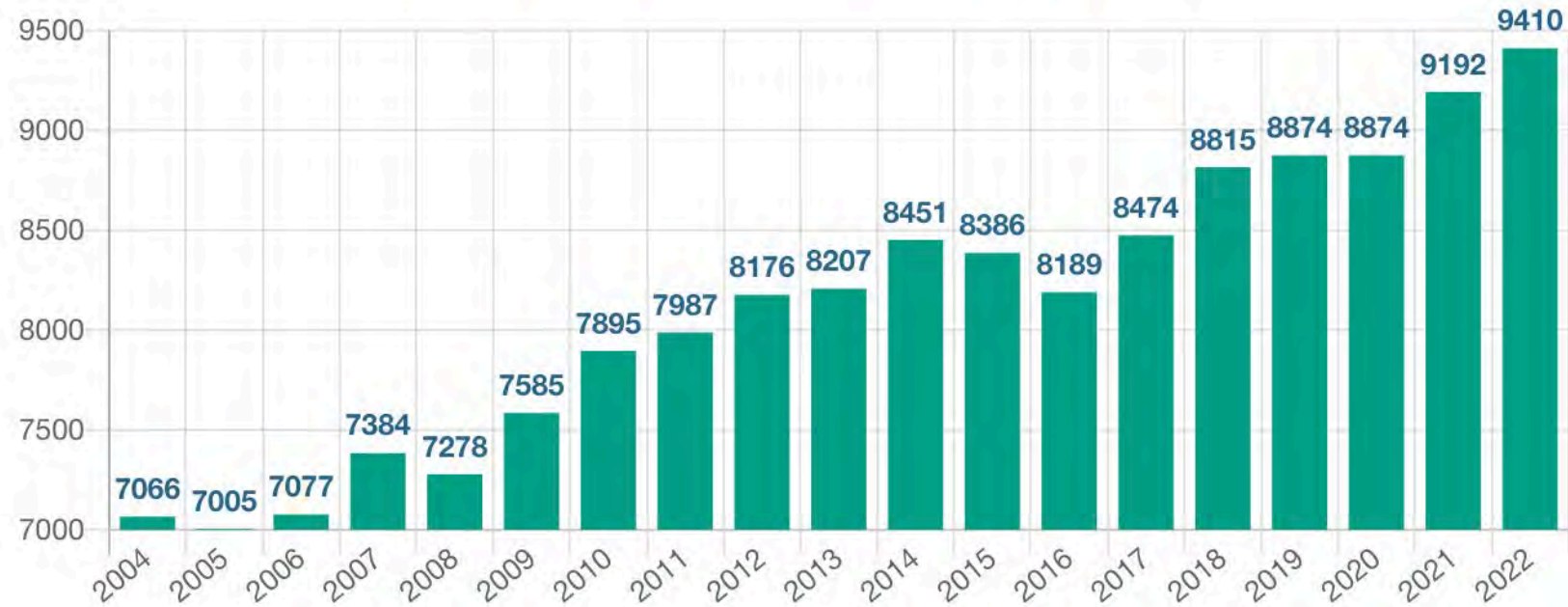
Diagnose

Stadiëring

Multidisciplinair  
oncologisch  
consult

Behandeling

## Aantal longkankers per jaar in België

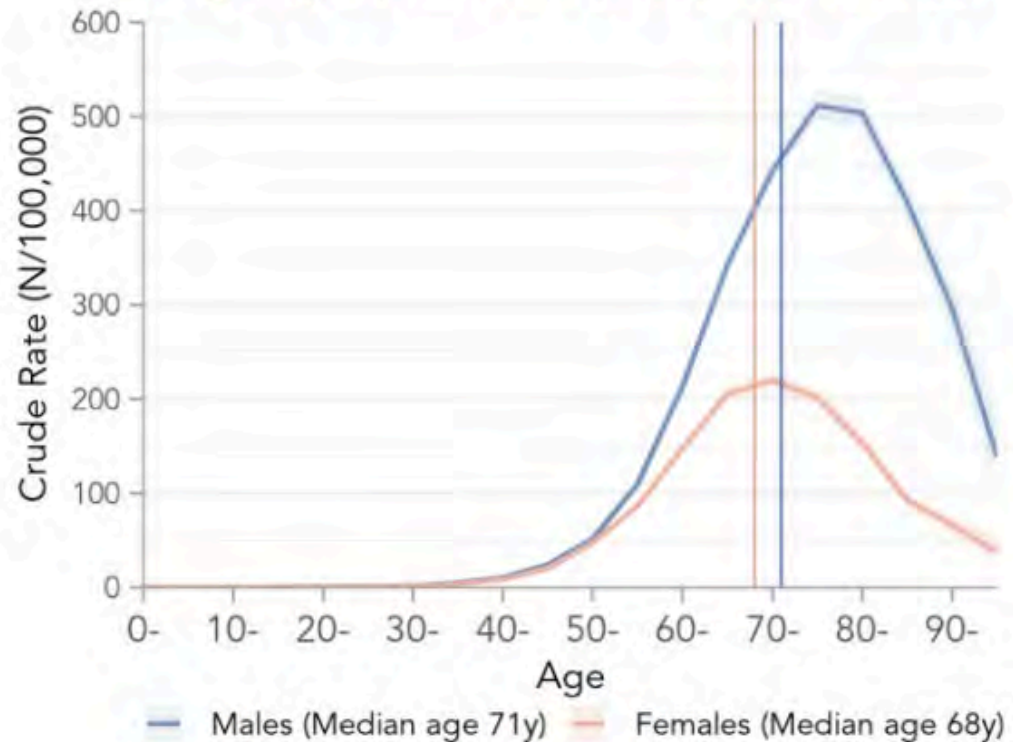


Cancer Fact Sheets, Kankerregister, Incidentiejaar 2022, Brussel 2025, België, 2012-2016. [Belgian Cancer Registry](#), [Brussels](#).

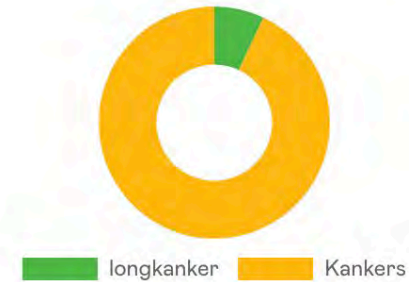
# Epidemiologie

# Epidemiologie

### Age-specific incidence, 2018-2022

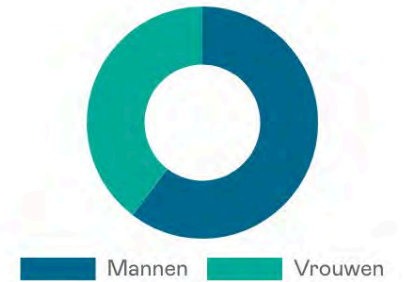


### Aantal kankers in België



In 2022 waren er **76220** kankergevallen, waarvan\* **9410** longkankers (**12,35%**)

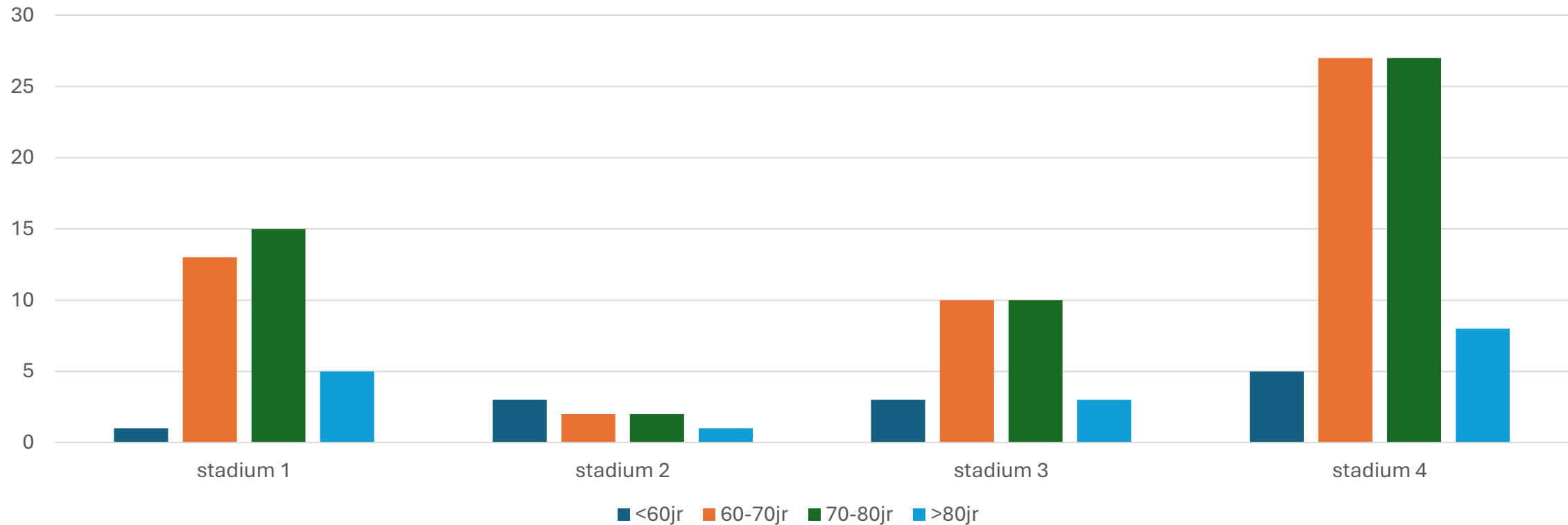
### Aantal longkankers in 2022



**3733** vrouwen voor **5677** mannen

# cijfers Oostende

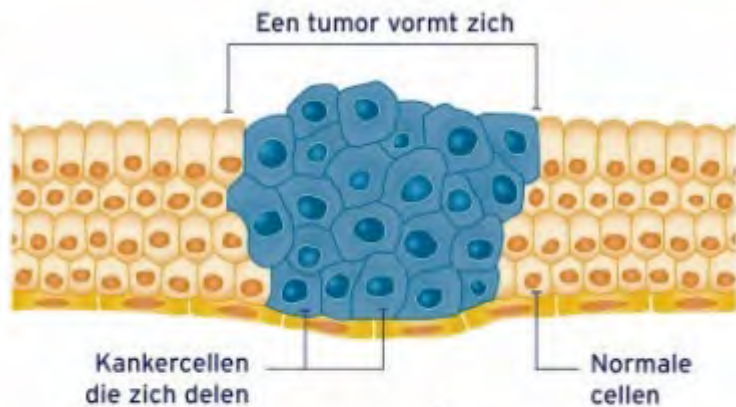
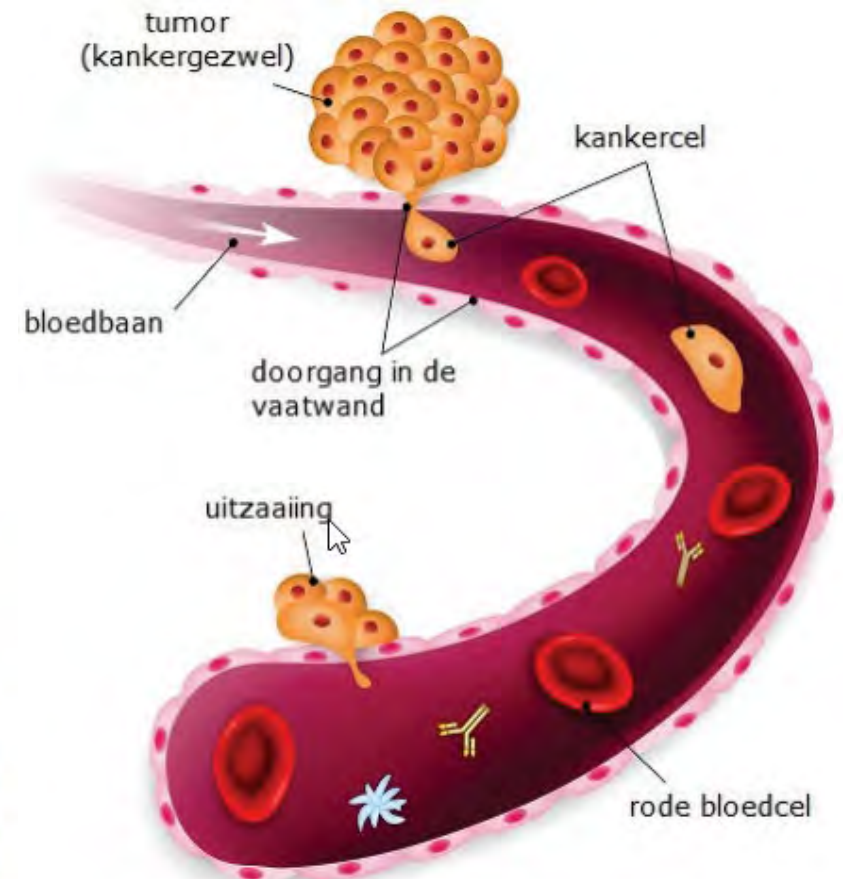
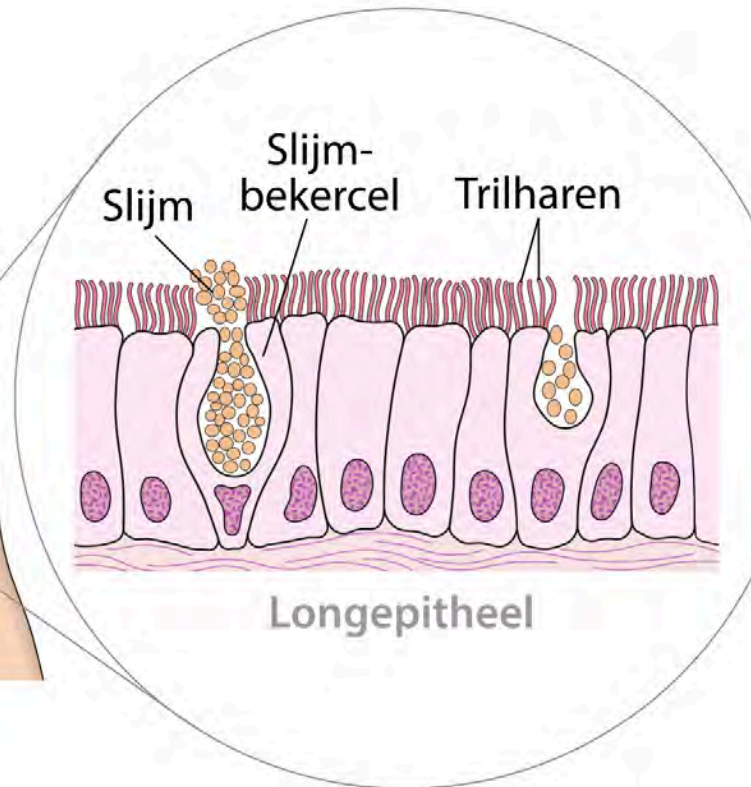
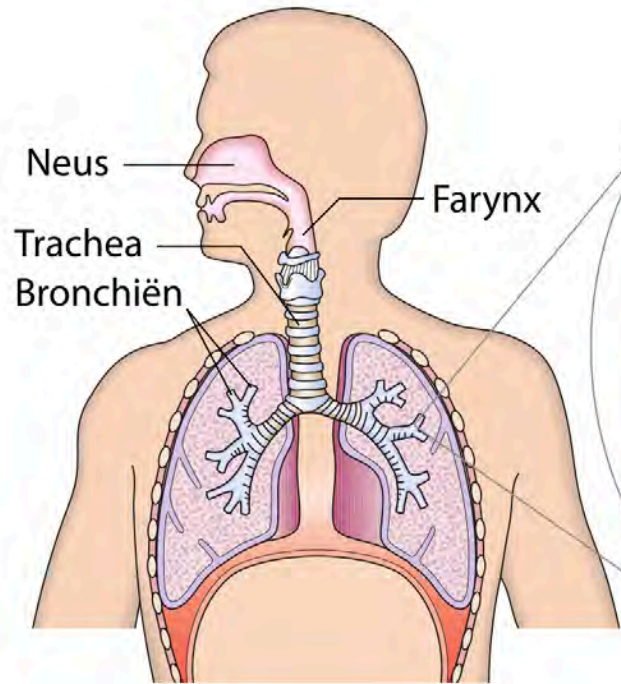
Leeftijdsverdeling longkanker patiënten AZ Oostende 2024



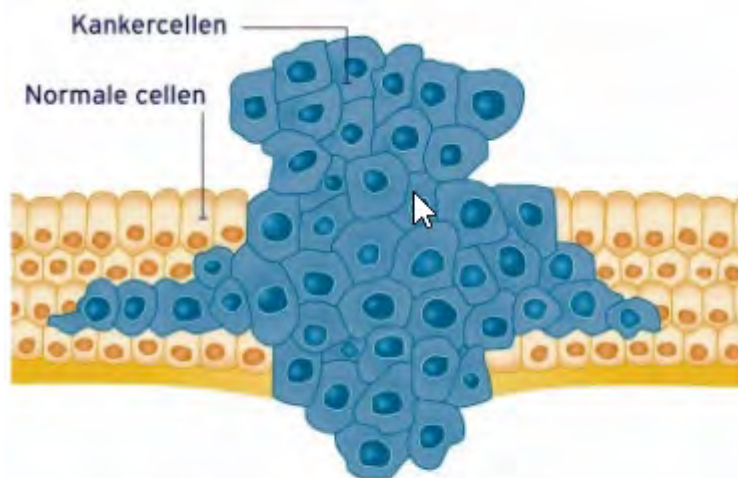
# Risicofactoren

- **Roken** (passief roken)
- **Asbest** (eterniet)
- **Metaalbewerking** (cadmium, chroom, arseen)
- **Chloorwaterstoffen** (petroleumindustrie)
- **Luchtverontreiniging** (fijn stof...)





Dit schema toont kankercellen die zich blijven vermenigvuldigen en zo een tumor vormen.

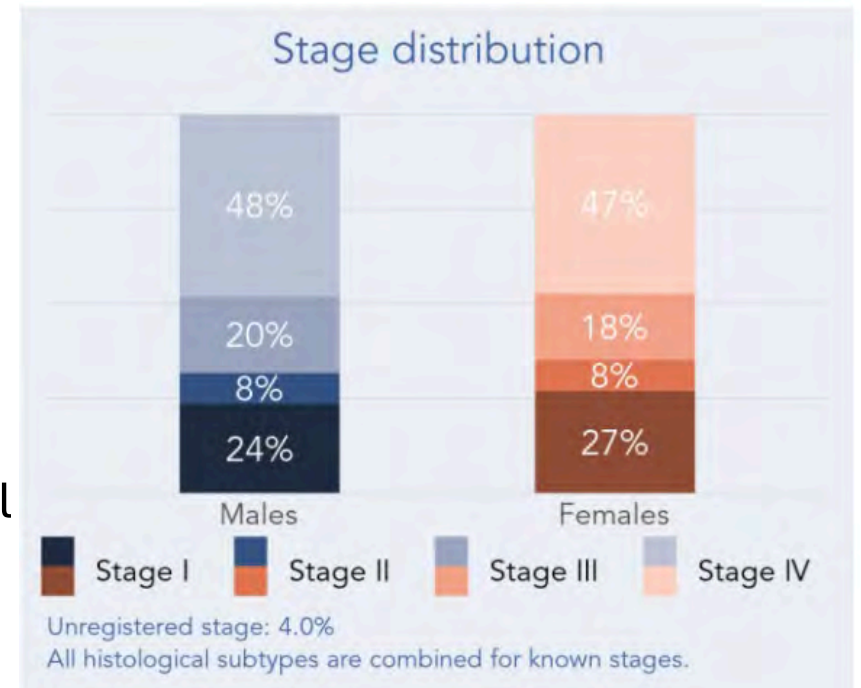


Dit schema toont een tumor die zich een weg baant door normaal weefsel.

Uitbreiding via bloedbaan

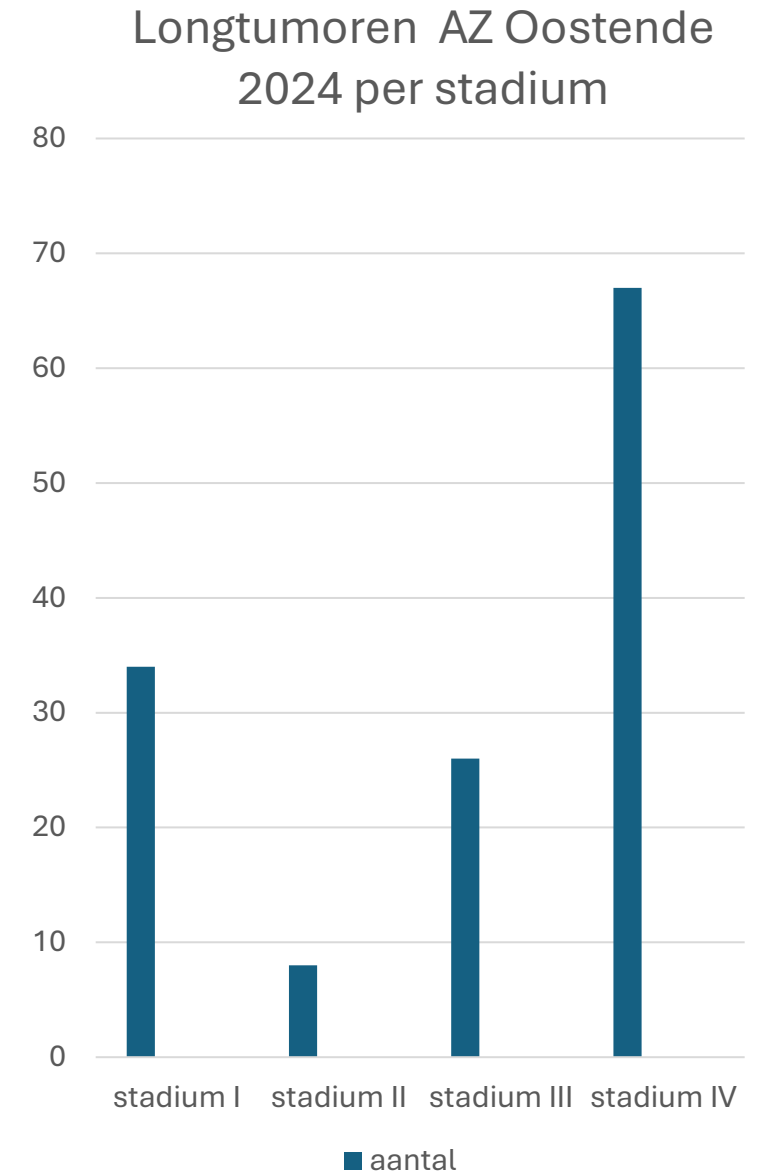
# Symptomen

- Hoesten
- (Frequente) luchtweginfecties die moeilijk genezen
- Blijvende COPD opstoot
- Vermagering
- Kortademigheid
- Pijn
- Bloedfluimen
- Malaise / algemeen onwel
- Neurologische klachten
- Heesheid

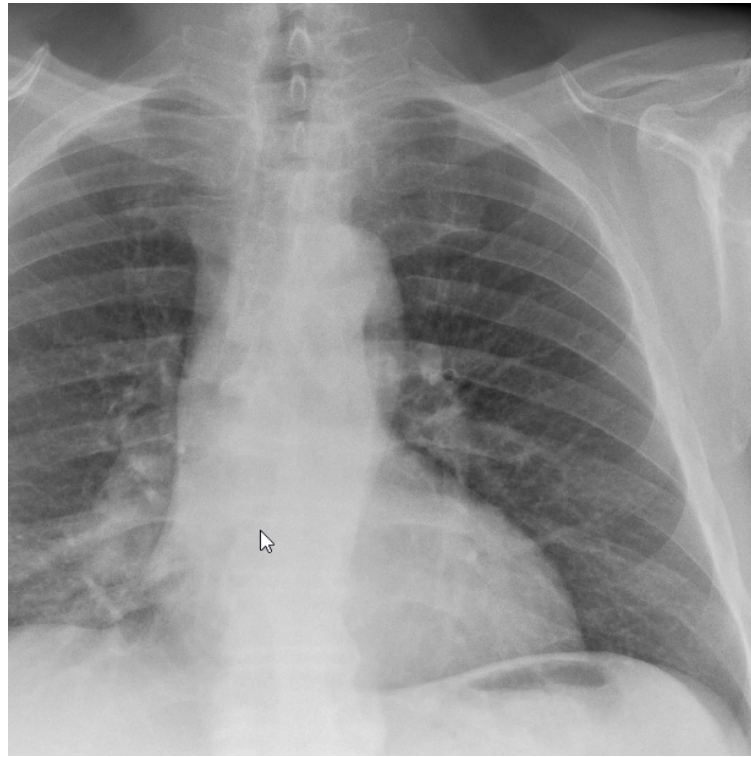
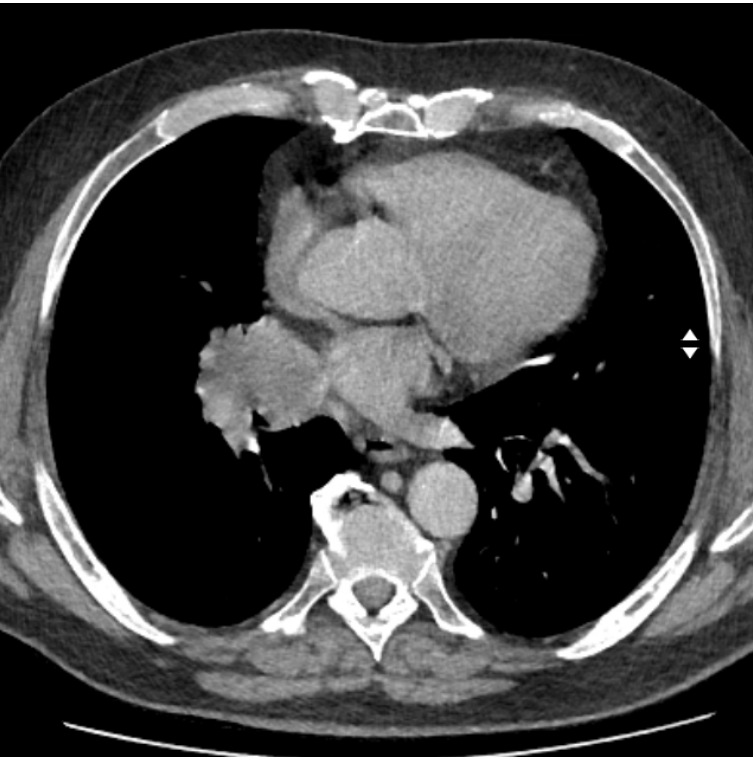


# Cijfers AZ Oostende 2024

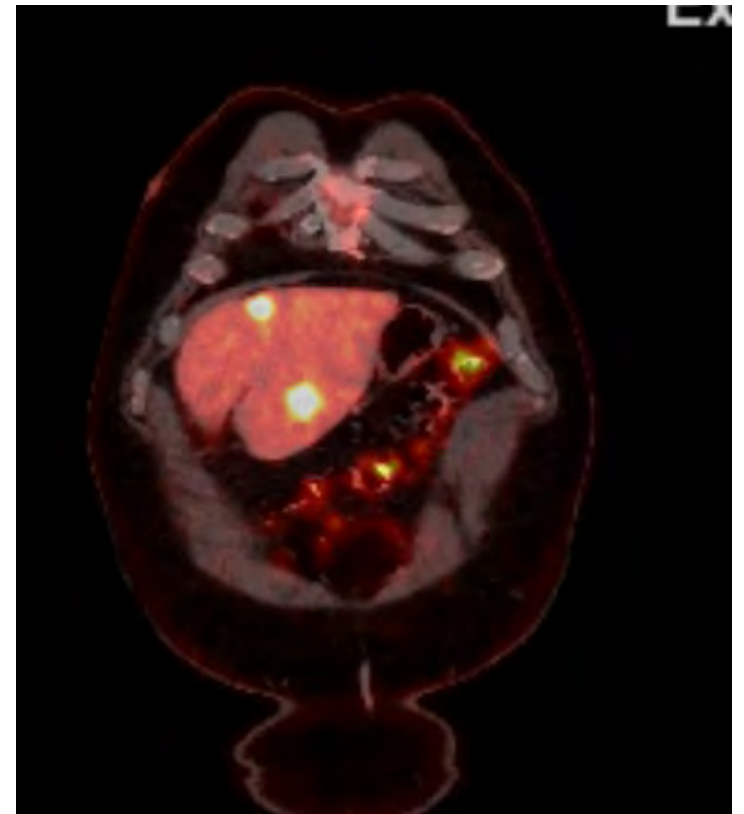
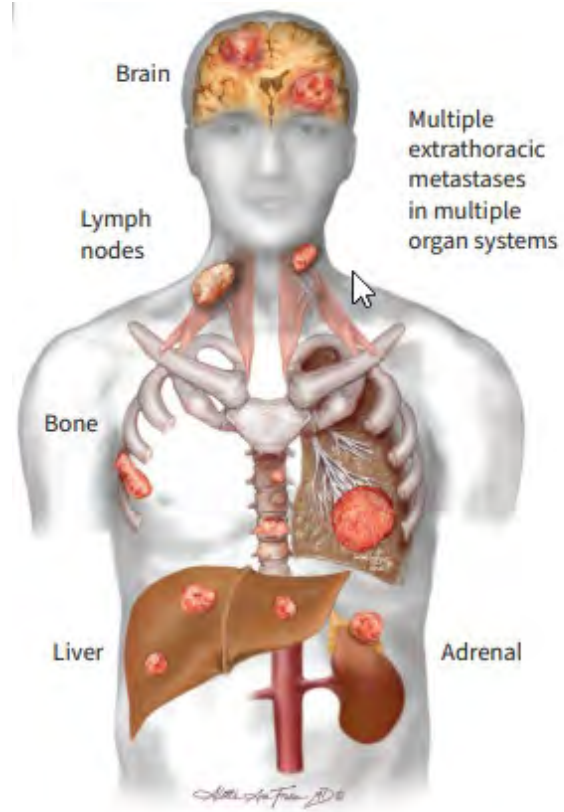
- 135 nieuwe diagnoses longkanker
- 3 diagnoses van mesotheliom=longvlieskanker



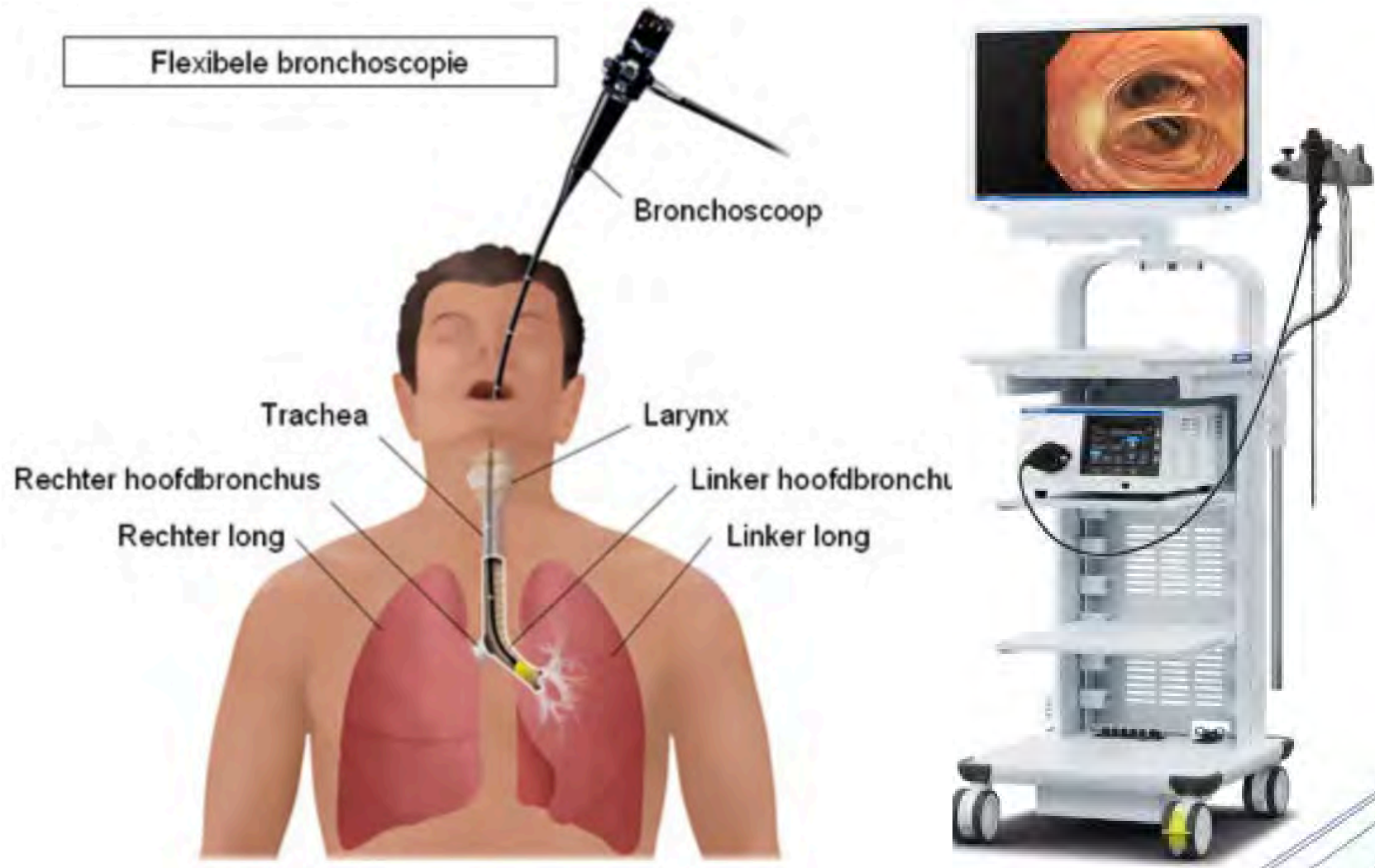
# Diagnose



# PET-CT



# Klassieke bronchoscopie

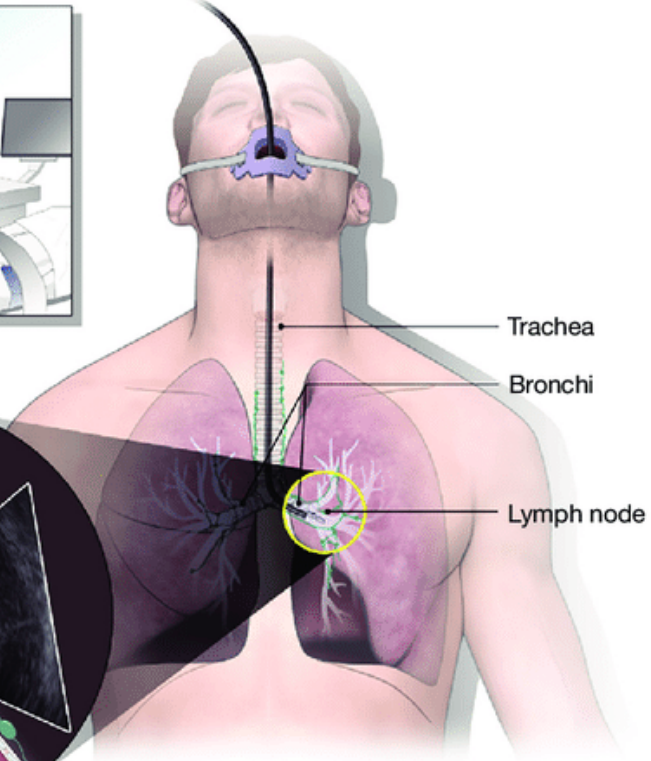
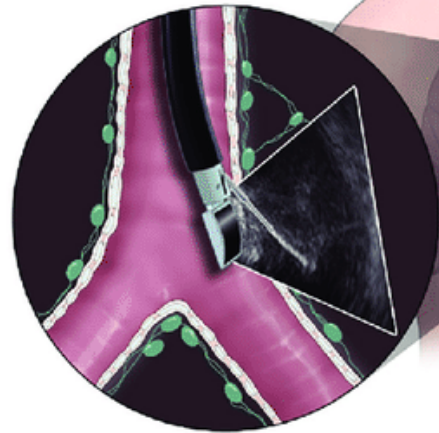


# Echo endoscopie: EBUS

A



EBUS-TBNA



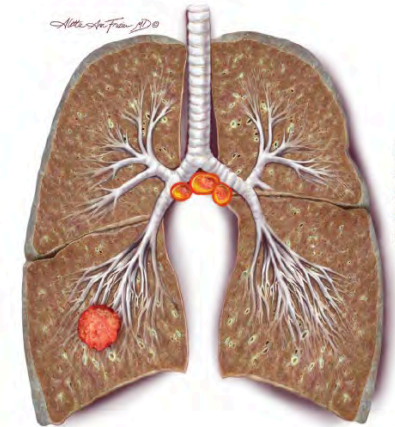
Trachea

Bronchi

Lymph node

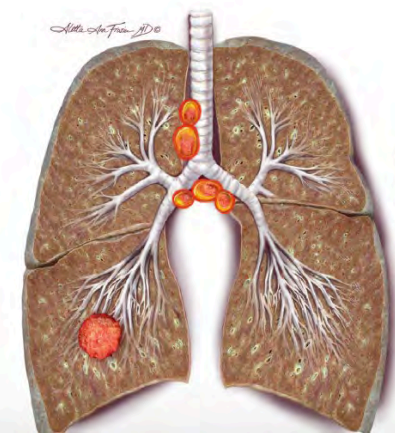


N2a



Metastasis to single ipsilateral mediastinal or subcarinal lymph node station

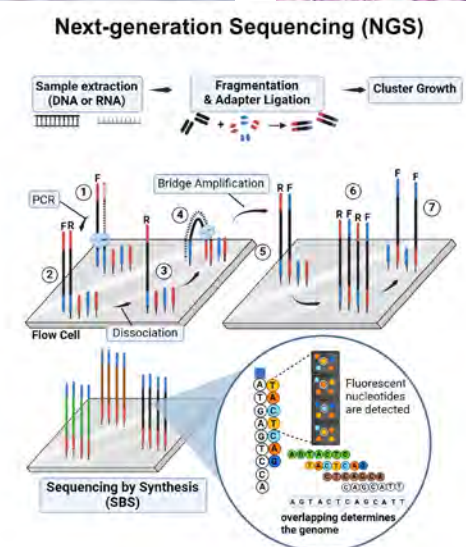
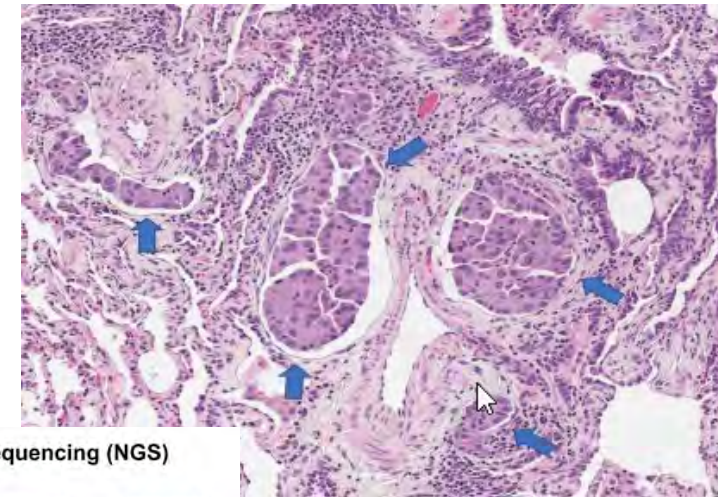
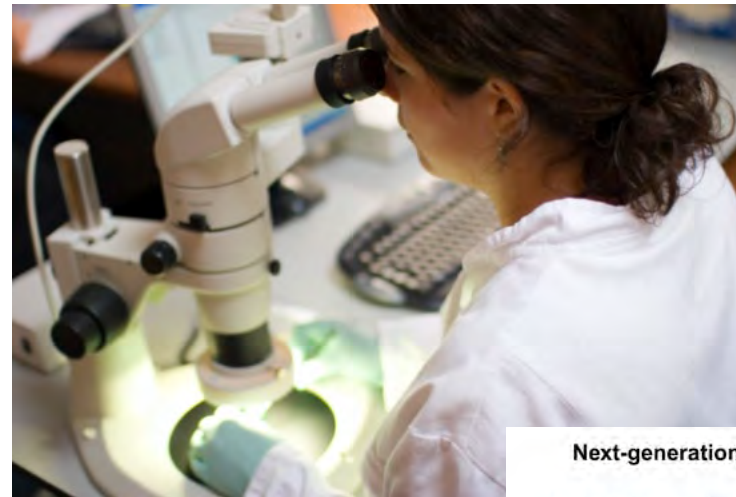
N2b



Metastasis to multiple ipsilateral mediastinal and/or subcarinal lymph node stations

# Biopsie onderzoek

- Uitzicht cellen
  - Kleine cellen(SCLC)
  - Grotere cellen(NSCLC)
    - Spino
    - Adeno
    - NOS
- Bijkomende kleuringen
  - PD-L1
- Genetisch profiel (NGS): 10 werkdagen
  - EGFR; KRAS; ALK; BRAF; ROS..



# Fitheid patiënt

- Karnofsky index – ECOG- WHO score
- Longfunctie
- Ergospirometrie
- Cardiaal nazicht



# Fitheid patiënt

## Eastern Cooperative Oncology Group (ECOG) Performance score

0 – Asymptomatic (Fully active, able to carry on all predisease activities without restriction)

1 – Symptomatic but completely ambulatory (Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature. For example, light housework, office work)

2 – Symptomatic, <50% in bed during the day (Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours)

3 – Symptomatic, >50% in bed, but not bedbound (Capable of only limited self-care, confined to bed or chair 50% or more of waking hours)

4 – Bedbound (Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair)

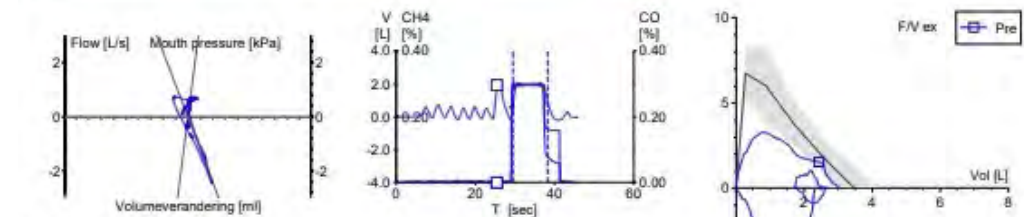
## KARNOFSKY PERFORMANCE STATUS SCALE DEFINITIONS RATING (%) CRITERIA

Able to carry on normal activity and to work; no special care needed.	100	Normal no complaints; no evidence of disease.
	90	Able to carry on normal activity; minor signs or symptoms of disease.
	80	Normal activity with effort; some signs or symptoms of disease.
Unable to work; able to live at home and care for most personal needs; varying amount of assistance needed.	70	Cares for self; unable to carry on normal activity or to do active work.
	60	Requires occasional assistance, but is able to care for most of his personal needs.
	50	Requires considerable assistance and frequent medical care.
Unable to care for self; requires equivalent of institutional or hospital care; disease may be progressing rapidly.	40	Disable; requires special care and assistance.
	30	Severely disabled; hospital admission is indicated although death not imminent.
	20	Very sick; hospital admission necessary; active supportive treatment necessary.
	10	Moribund; fatal processes progressing rapidly.
	0	Dead

# Fitheid patiënt



		Pre	%Theo	Theo	
<b>Spirometrie</b>					
<b>Substantie</b>					
<b>Dosis</b>					
FVC	L	3.00	86	3.47	
FEV 1	L	2.44	80	3.03	
FEV 1 % FVC	%	81.16	92	87.78	
MMEF 75/25	L/s	2.30	63	3.65	
PEF	L/s	3.27	49	6.72	
FVC IN	L	2.30	68	3.39	
FIF 50	L/s	3.22			
Fout ATS ERS 05		1205			
<b>Volumina</b>					
VC	L	3.00	89	3.39	
ITGV	L	1.28	51	2.52	
ERV	L	0.79	61	1.30	
RV	L	0.48	40	1.22	
RV % TLC	%	13.90	51	27.46	
TLC	L	3.49	77	4.51	
IC	L	2.21	105	2.09	
<b>Weerstand</b>					
SR tot	kPa*s	0.83	86	0.96	
R tot	kPa/(L/s)	0.58	193	0.30	
<b>Diffusie</b>					
DLCO SB	ml/(min*mmHg)	19.40	95	20.35	
DLCOc SB	ml/(min*mmHg)			20.35	
Hb	g(Hb)/dL			13.50	
VA-SB	L	3.26	77	4.22	
DLCO/VA	ml/(min*mmHg*L)	5.95	122	4.87	
VIN-SB	L	2.14	63	3.39	
<b>Max. drukken</b>					
MIP	cmH2O			73.8	
MEP	cmH2O			94.57	
<b>Exhaled NO</b>					
<b>FeNO</b>					

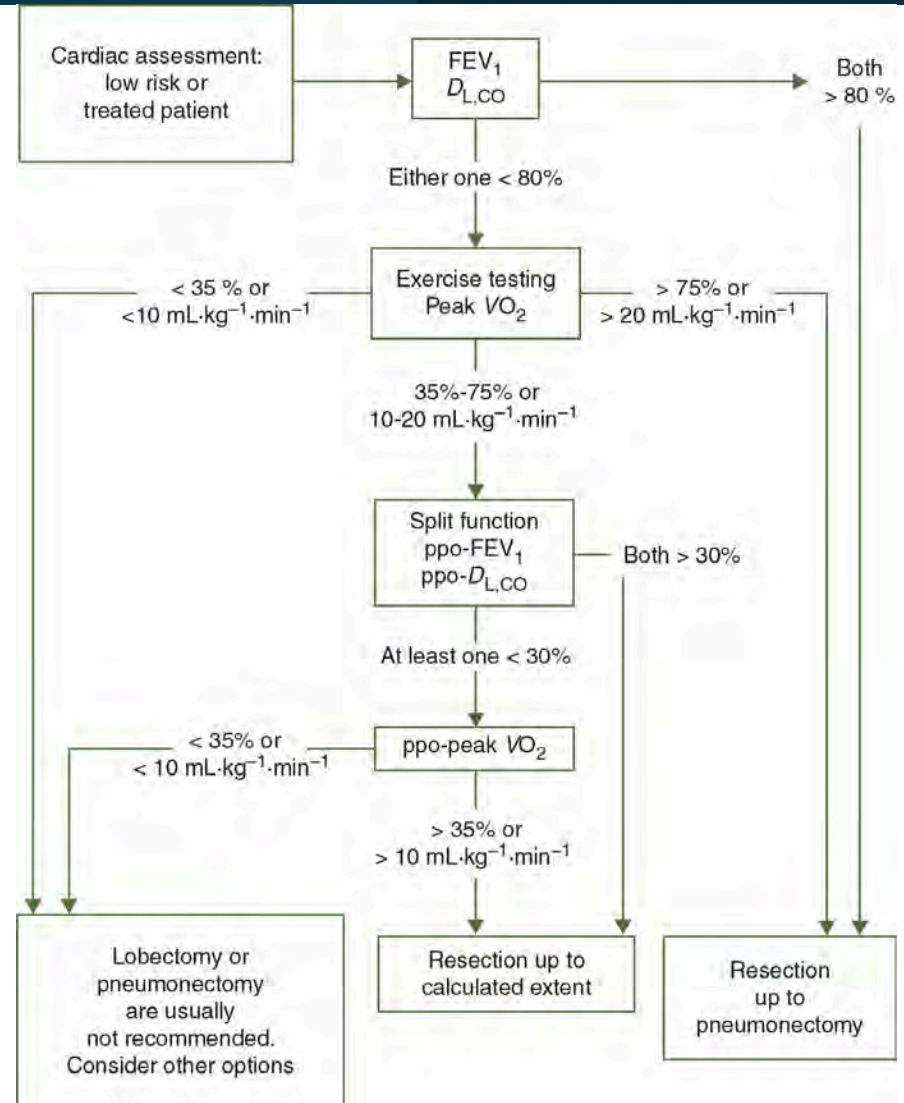


Commentaar :

# Fietsproef



Abbildung ähnlich



# Hartnazicht

## Revised cardiac risk index

**Points**

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### Weighted factors

Ischaemic heart disease	1.5
History of cerebrovascular disease	1.5
Serum creatinine > 2 mg/dL	1
Pneumonectomy planned	1.5





## Lung TNM Definitions–9th Edition

**T: Primary tumor**

Tx	Primary tumor cannot be assessed <sup>a</sup>
T0	No evidence of primary tumor
Tis	Carcinoma in situ <sup>b</sup>
T1	Tumor surrounded by lung or visceral pleura, or in a lobar or more peripheral bronchus <sup>c</sup>
T1mi	Minimally invasive adenocarcinoma <sup>d</sup>
T1a	Tumor ≤1 cm in greatest dimension
T1b	Tumor >1 cm but ≤2 cm in greatest dimension
T1c	Tumor >2 cm but ≤3 cm in greatest dimension
T2	Tumor with any of the following features:
T2a	<ul style="list-style-type: none"> <li>tumor &gt;3 cm but ≤4 cm in greatest dimension;</li> <li>invades visceral pleura;</li> <li>invades an adjacent lobe;</li> <li>involves main bronchus (up to but not including the carina) or is associated with atelectasis or obstructive pneumonitis extending to the hilar region, involving either part of or the entire lung</li> </ul>
T2b	Tumor >4 cm but ≤5 cm in greatest dimension
T3	Tumor with any of the following features: <ul style="list-style-type: none"> <li>tumor &gt;5 cm but ≤7 cm in greatest dimension;</li> <li>invades parietal pleura or chest wall;</li> <li>invades pericardium, phrenic nerve, or azygos vein;<sup>e</sup></li> <li>invades thoracic nerve roots (i.e. T1, T2) or stellate ganglion;</li> <li>separate tumor nodule(s) in the same lobe as the primary</li> </ul>
T4	Tumor with any of the following features: <ul style="list-style-type: none"> <li>tumor &gt;7 cm in greatest dimension;</li> <li>invades mediastinum, thymus, trachea, carina, recurrent laryngeal nerve, vagus nerve, esophagus or diaphragm;</li> <li>invades heart, great vessels (aorta, superior/inferior vena cava, intrapericardial pulmonary arteries/veins), supra-aortic arteries, or brachiocephalic veins;</li> <li>invades subclavian vessels, vertebral body, lamina, spinal canal, cervical nerve roots, or brachial plexus (i.e. trunks, divisions, cords, or terminal nerves);</li> <li>separate tumor nodule(s) in a different ipsilateral lobe than that of the primary</li> </ul>

**N: Regional Lymph Nodes**

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in ipsilateral peribronchial and/or ipsilateral hilar and/or intrapulmonary lymph nodes, including involvement by direct extension
N2	Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s) <ul style="list-style-type: none"> <li>N2a – Single N2 station involvement</li> <li>N2b – Multiple N2 station involvement</li> </ul>
N3	Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene or supraclavicular lymph node(s)

**M: Distant Metastasis**

M0	No distant metastasis
M1	Distant metastasis
M1a	Tumor with pleural or pericardial nodules or malignant pleural or pericardial effusions, separate tumor nodule(s) in a contralateral lobe
M1b	Single extrathoracic metastasis in a single organ system
M1c	Multiple extrathoracic metastases
M1c1	Multiple extrathoracic metastases in a single organ system
M1c2	Multiple extrathoracic metastases in multiple organ systems

<sup>a</sup> This includes tumors proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy.

<sup>b</sup> This includes adenocarcinoma in situ – Tis (AIS) – and squamous cell carcinoma in situ – Tis (SCIS).

<sup>c</sup> The uncommon superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximal to the main bronchus, is also classified as T1a.

<sup>d</sup> Solitary adenocarcinoma (not more than 3 cm in greatest dimension), with a predominantly lepidic pattern and not more than 5 mm invasion in greatest dimension.

<sup>e</sup> Although these structures lie within the mediastinum, the degree of mediastinal penetration by the tumor needed to invade these structures is not counted as T4.

**Table 1. Stage Groups of the 9th Edition of the Tumor, Node, Metastasis (TNM) Classification of Lung Cancer<sup>2</sup>**

9th Edition TNM Descriptors and Stages						
T/M	Categories and Descriptors	N0	N1	N2		N3
				N2a	N2b	
T1	T1a ≤1 cm	IA1	IIA	IIB	IIIA	IIIB
	T1b >1 to ≤2 cm	IA2	IIA	IIB	IIIA	IIIB
	T1c >2 to ≤3 cm	IA3	IIA	IIB	IIIA	IIIB
T2	T2a Visceral pleura / central invasion	IB	IIB	IIIA	IIIB	IIIB
	T2a >3 to ≤4 cm	IB	IIB	IIIA	IIIB	IIIB
	T2b >4 to ≤5 cm	IIA	IIB	IIIA	IIIB	IIIB
T3	T3 >5 to ≤7 cm	IIB	IIIA	IIIA	IIIB	IIIC
	T3 Invasion	IIB	IIIA	IIIA	IIIB	IIIC
	T3 Same lobe separate tumor nodules	IIB	IIIA	IIIA	IIIB	IIIC
T4	T4 >7 cm	IIIA	IIIA	IIIB	IIIB	IIIC
	T4 Invasion	IIIA	IIIA	IIIB	IIIB	IIIC
	T4 Ipsilateral separate tumor nodules	IIIA	IIIA	IIIB	IIIB	IIIC
M1	M1a Contralateral tumor nodules	IVA	IVA	IVA	IVA	IVA
	M1a Pleural / pericardial effusion, nodules	IVA	IVA	IVA	IVA	IVA
	M1b Single extrathoracic metastasis	IVA	IVA	IVA	IVA	IVA
	M1c1 Multiple metastases in 1 organ system	IVB	IVB	IVB	IVB	IVB
	M1c2 Multiple metastases in >1 organ systems	IVB	IVB	IVB	IVB	IVB

# Multidisciplinair oncologisch consult

- Pneumoloog
- Oncoloog (Thoracacaal)
- Radiotherapeut
- Chirurg
- Radioloog
- Nuclearist
- Patholoog
- Oncologisch consulent
- Secretariaat



# Behandeling

## Nog te genezen

- Stadium I
- Stadium II
- Stadium III

## Niet meer te genezen

- Stadium IV

# Soorten behandelingen: 3 pijlers

Chirurgie

Radiotherapie

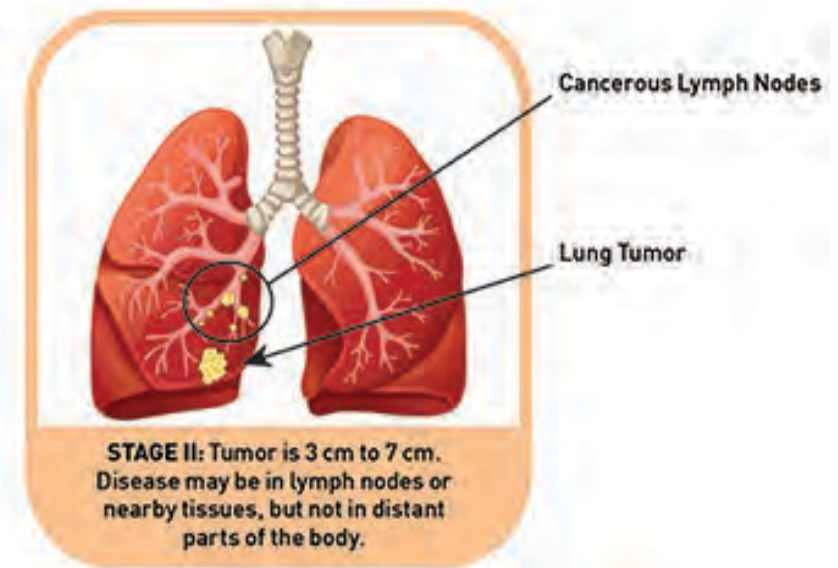
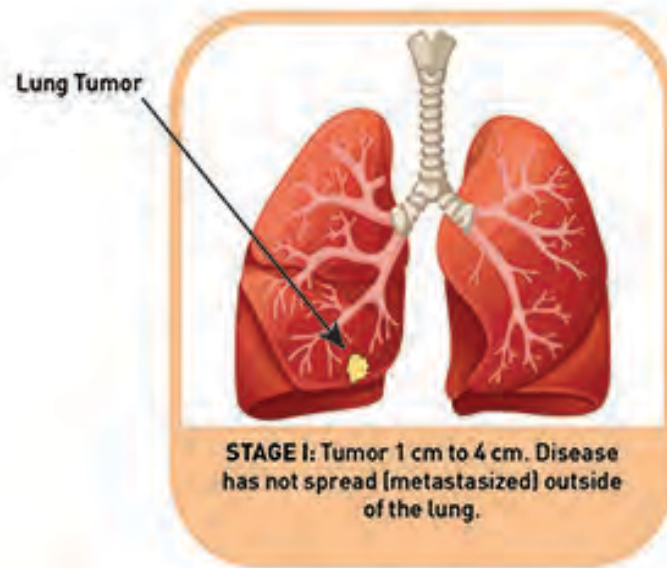
Systemische behandeling

- Chemotherapie
- Immunotherapie
- Gerichte therapie

# Oncologisch consulent=oncocoach

- Karla Logghe, Marie-France Dehant
- Onmisbaar in educatie en opvolging van patiënten
- Educatiekaart
- Ondersteuning bij vragen/tel contact met pt

Vroege  
stadia van  
longkanker:  
doel =  
genezen

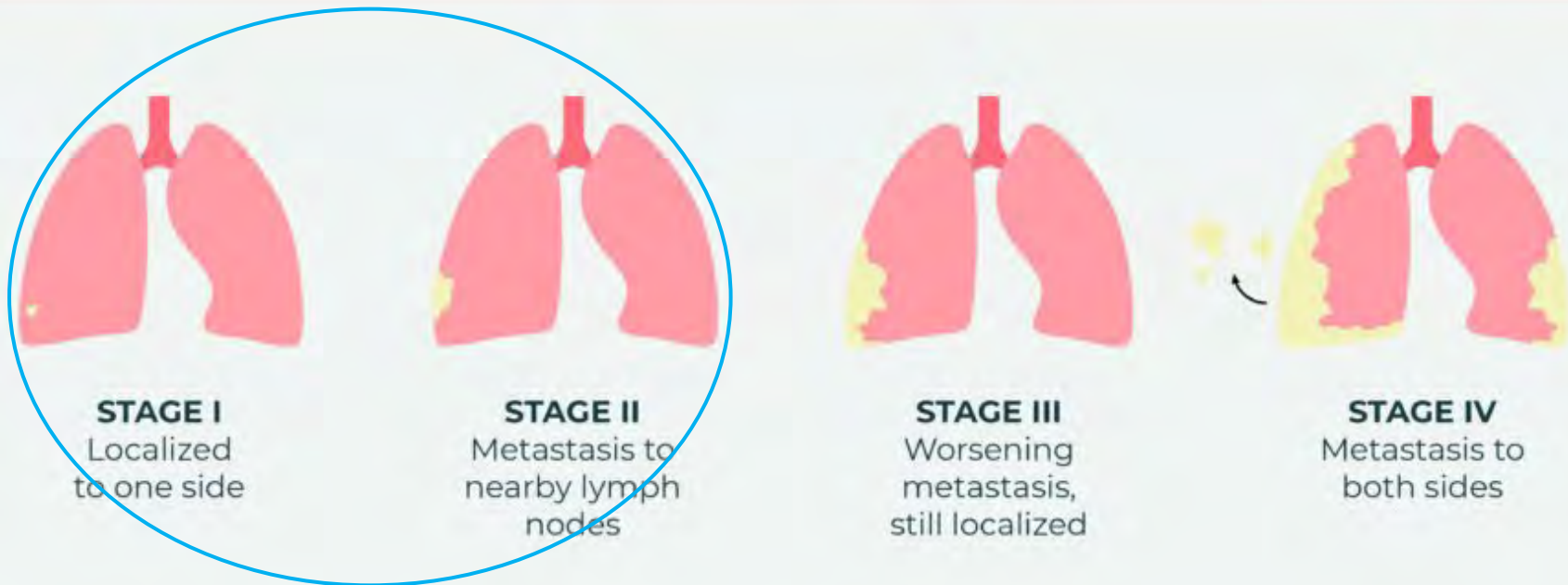


└Totaal stadium 3 (21%) ┘

# Vroege stadia longvlieskanker:

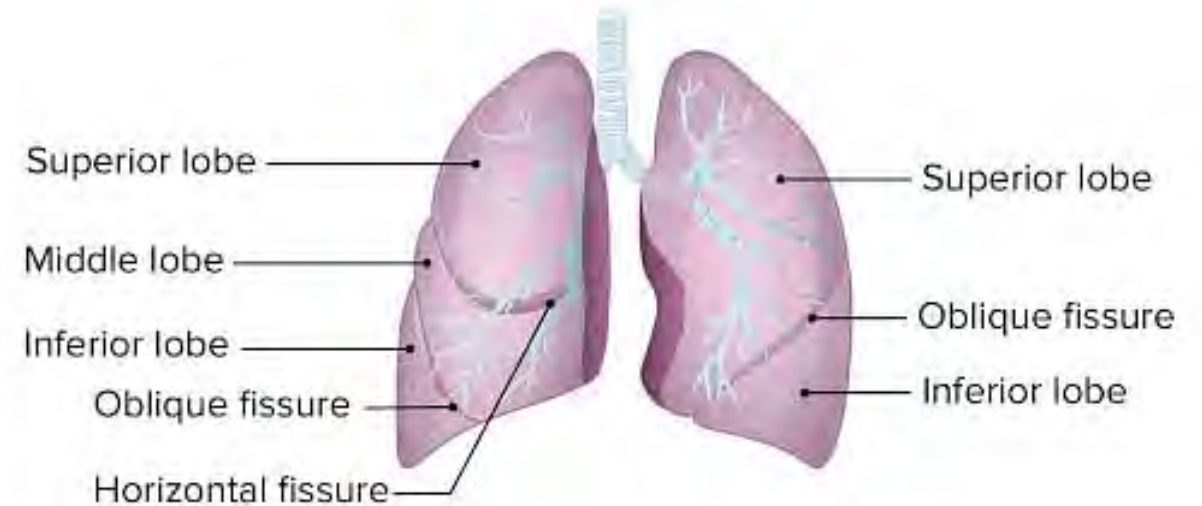


## MESOTHELIOMA STAGES



# Stadia I en II: voorkeur chirurgie +/- nabehandeling

- Operatie: wegname 1 lob of meerdere lobben of ganse long
- Soort operatie: afh van ligging en grootte van de tumor



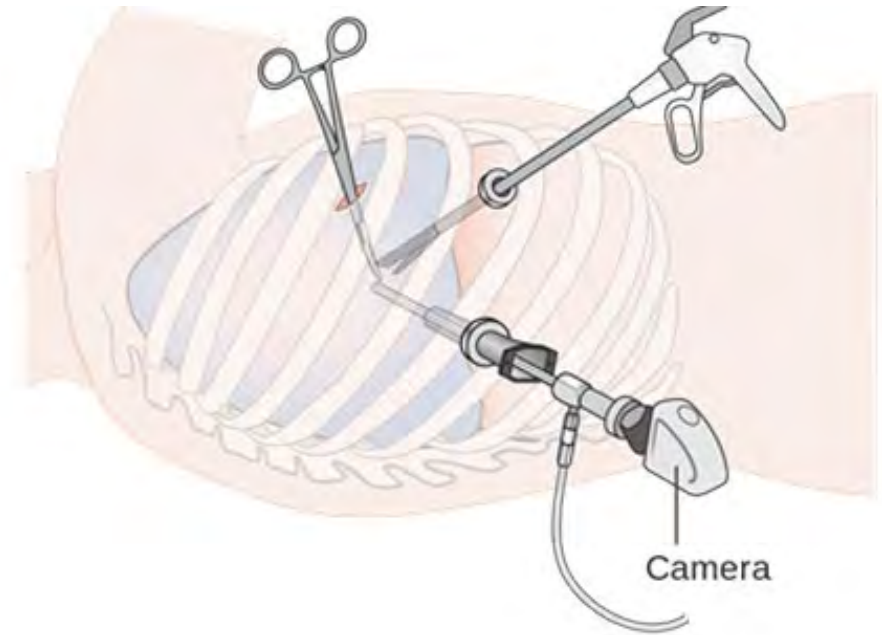
# Kijkoperatie: 1 tot 3 gaatjes vs open ingreep



VATS



Open thoracotomy



# Wie kan een operatie aan?



Longfunctie/conditie

Goede hartfunctie

Liefst niet meer roken  
4w voor de ingreep

Goede voedingsstatus  
evt bijvoeding

Evt ijzersupplement



**FIT!**  
*tijdens of na*  
**KANKER**

met een trainings programma van Onconet



Bij twijfel : Fietsproef

# St I en II: als operatie niet lukt -> bestraling

Te zwakke  
longfunctie, te  
weinig conditie obv  
fietsproef

Zuurstofafhankelijk

Te zwakke  
hartfunctie

Wens van de  
patiënt

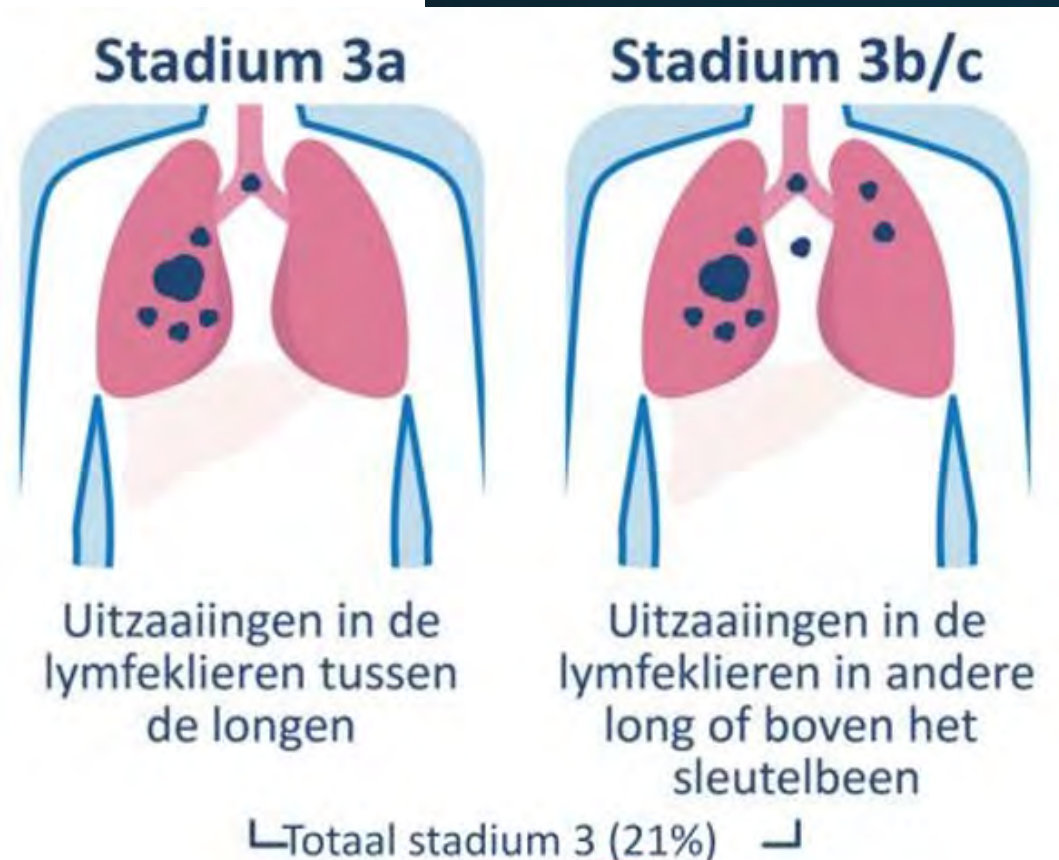
# Bestraling ism AZ St Jan Brugge



- Lange reeks van 33 keer
- Korte reeks hooggedoseerde bestraling 3-8x

# Stadium III: lokaal gevorderde ziekte

- Opzet: genezen



# Behandeling stadium III

Eerder zelden  
Chirurgie

Meestal  
chemotherapie  
en bestraling

Soms  
immuuntherapie

# Stadium III: chirurgie

Alleen al er niet veel  
klieren ziek zijn

**Na voorbehandeling  
met chemo en  
immuuntherapie**

# Stadium III: meestal chemo en bestraling



ALS OPERATIE NIET MOGELIJK IS  
OWV TEVEEL KLIEREN/TE GROTE  
KLIEREN



CHEMOTHERAPIE EN BESTRALING :  
TEGELIJKERTIJD OF NA ELKAAR



TEGELIJKERTIJD IS HET BESTE MAAR  
OOK HET "ZWAARSTE"



ALS GEEN TOENAME VD ZIEKTE NA  
STOP BESTRALING:  
IMMUUNTHERAPIE GEDURENDE 1  
JAAR

# Chemotherapie=cytostatica



Dat zijn medicijnen die kankercellen doden of de groei van de kanker in je lichaam remmen.



# Chemotherapie:



- 2 producten: Platinum en Pemetrexed(anti FZ) of Paclitaxel(taxusplant)
- Via poortkatheter

# Stadium IV ziekte= niet te genezen

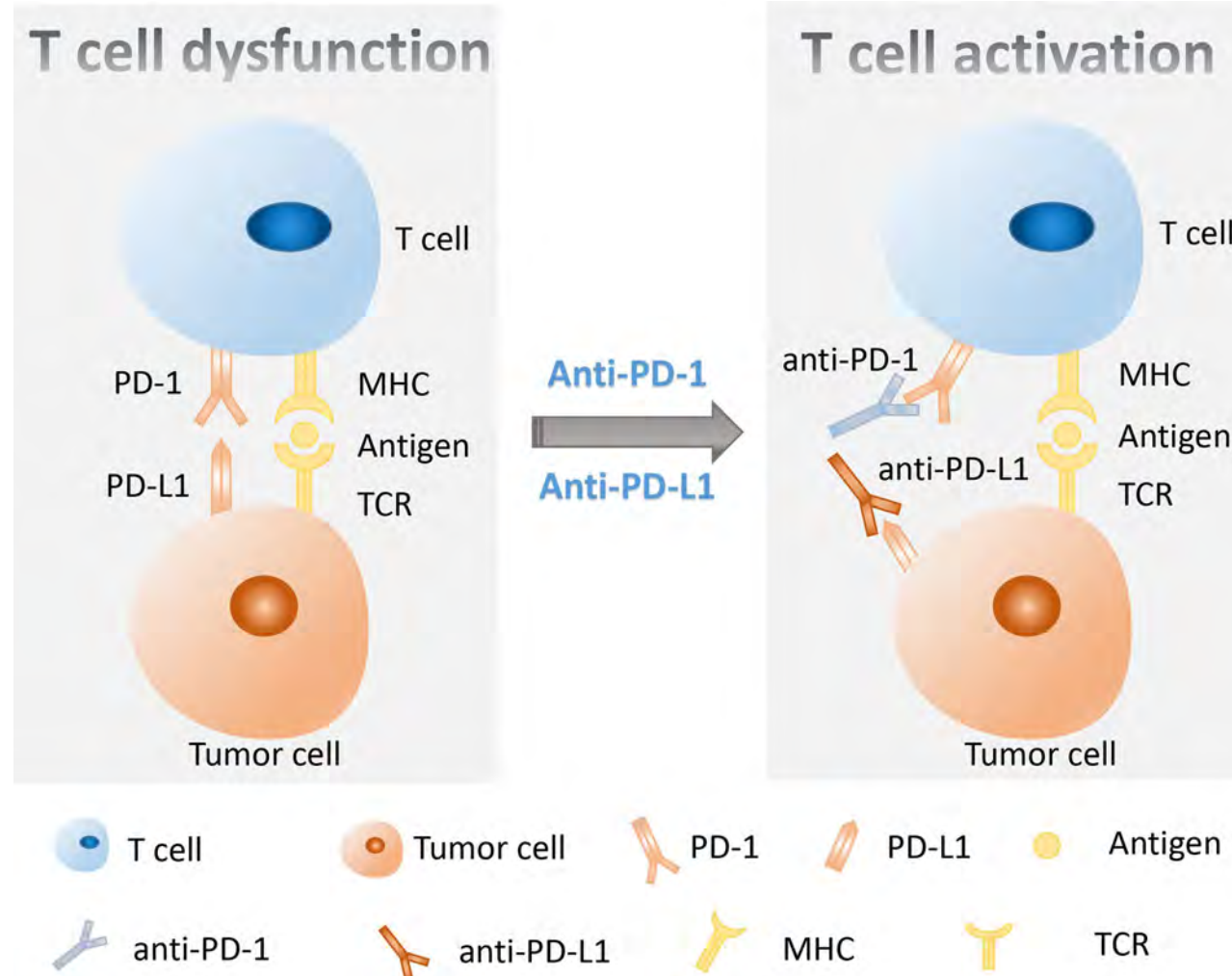
Helpt vd patiënten

Meestal immunotherapie  
+/- chemotherapie

zelden: gerichte therapie  
in tabletten

# Werking immuuntherapie

What is checkpoint blockade?



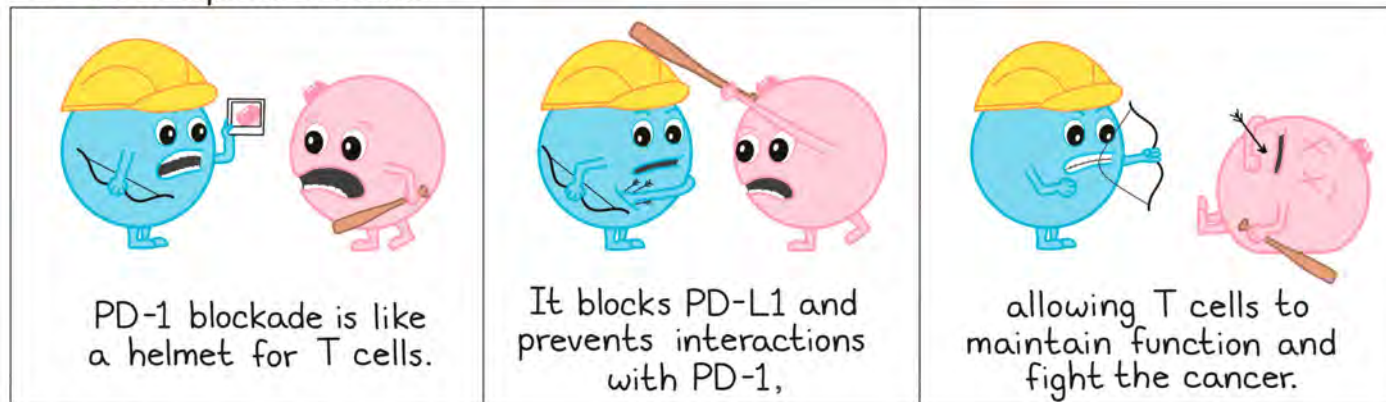
Nivolumab  
Pembrolizumab  
Cemiplimab

Atezolizumab  
Durvalumab

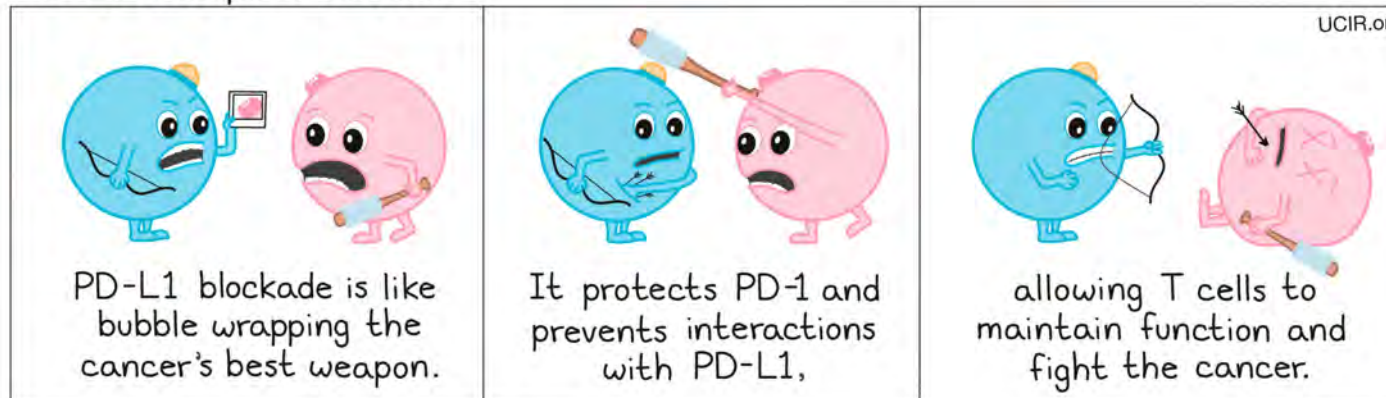
# Cartoon immunotherapie

What is checkpoint blockade?

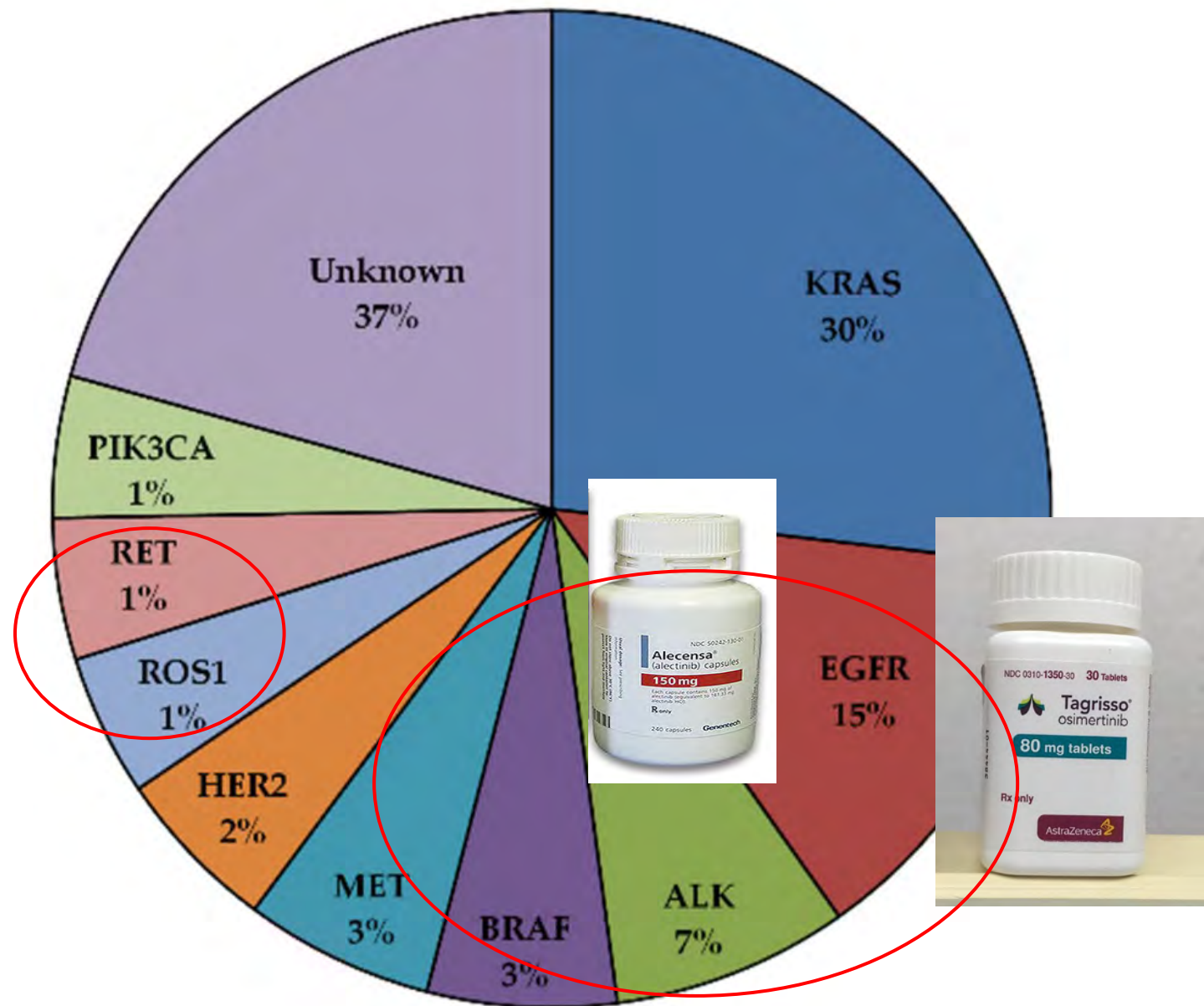
## PD-1 checkpoint blockade



## PD-L1 checkpoint blockade



# Gerichte therapie: tabletten



# Ondersteuning voor ongeneeslijke zieken



Welke vragen kan iemand hebben in deze fase van het leven?

