



# Lung cancer

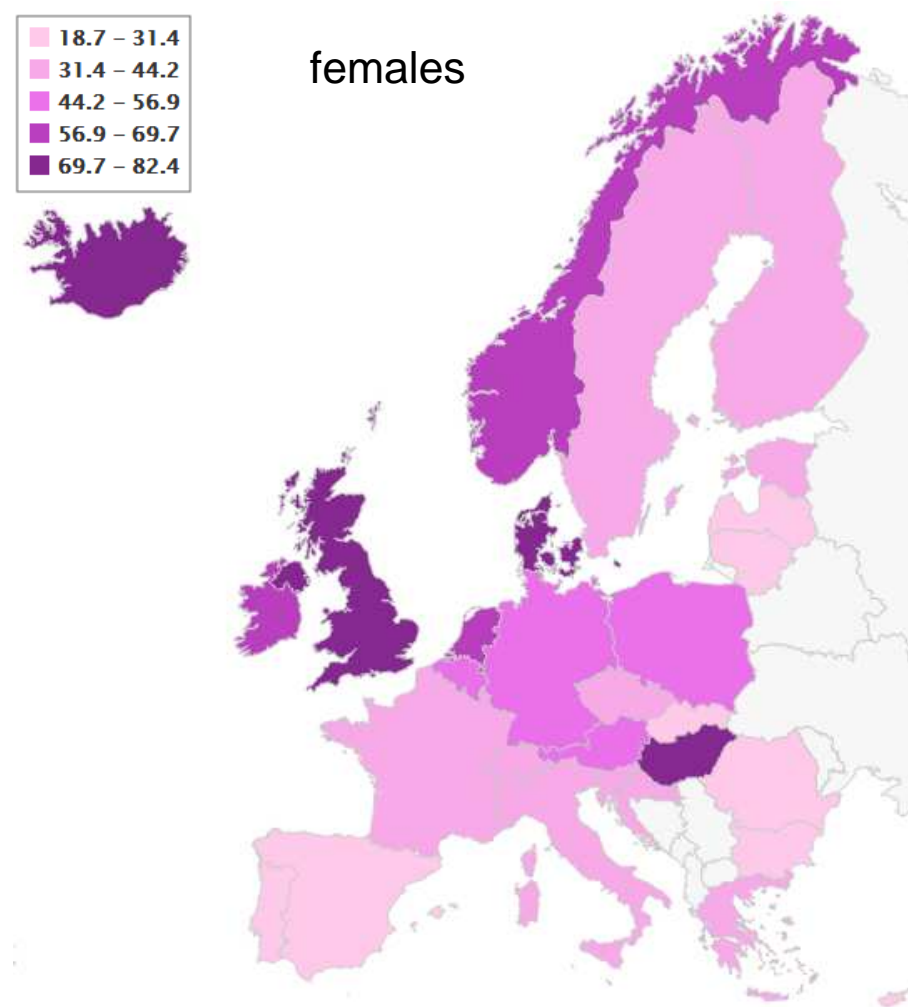
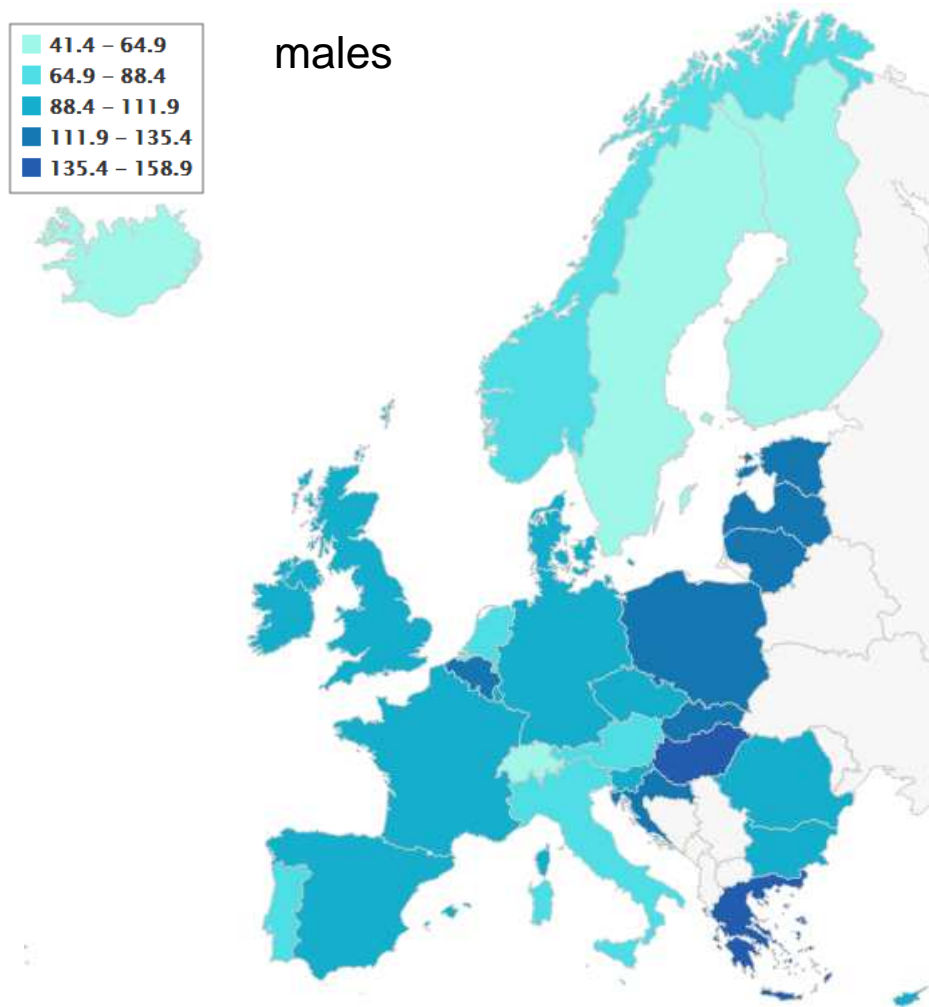
## Coding issues

Otto Visser  
June 2019

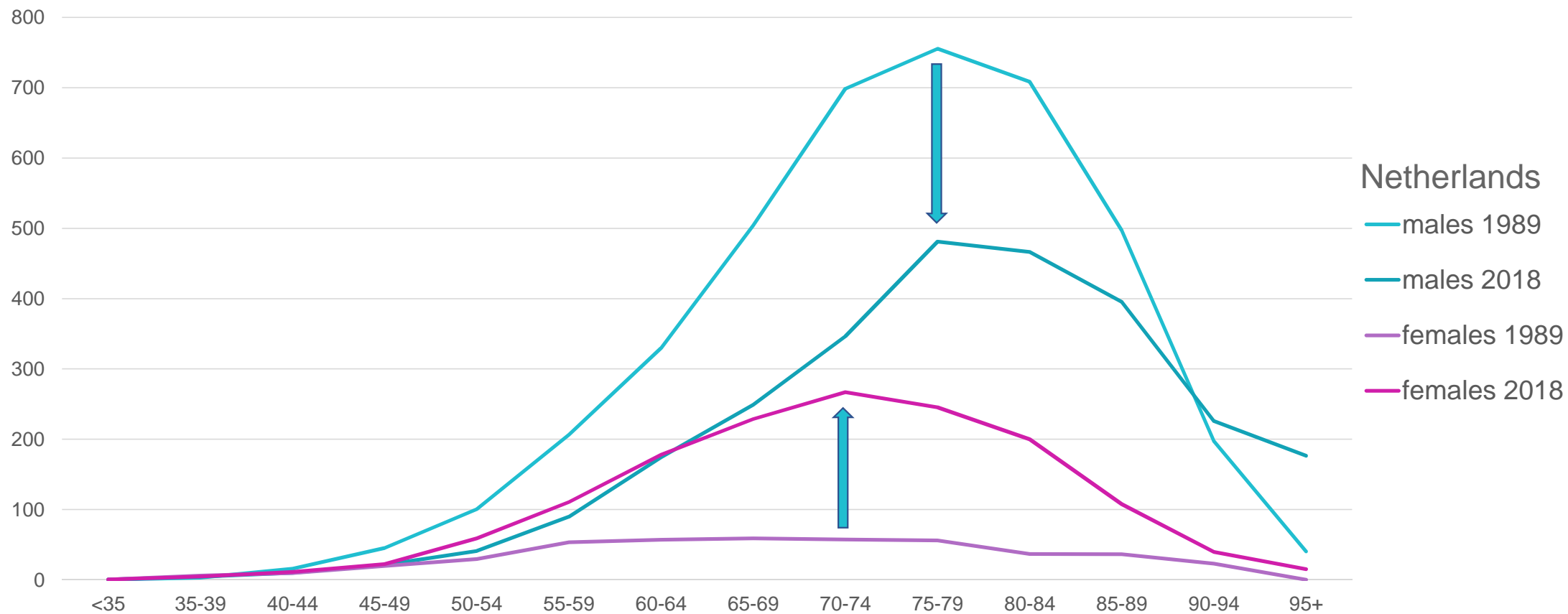
# Introduction

- Epidemiological information
  - Incidence & mortality trend in Europe, survival
  - Distribution according to age and sex
- Risk factors
- (Diagnostics & staging procedures)
- Topography & morphology
- Stage
- Treatment
- Quality issues

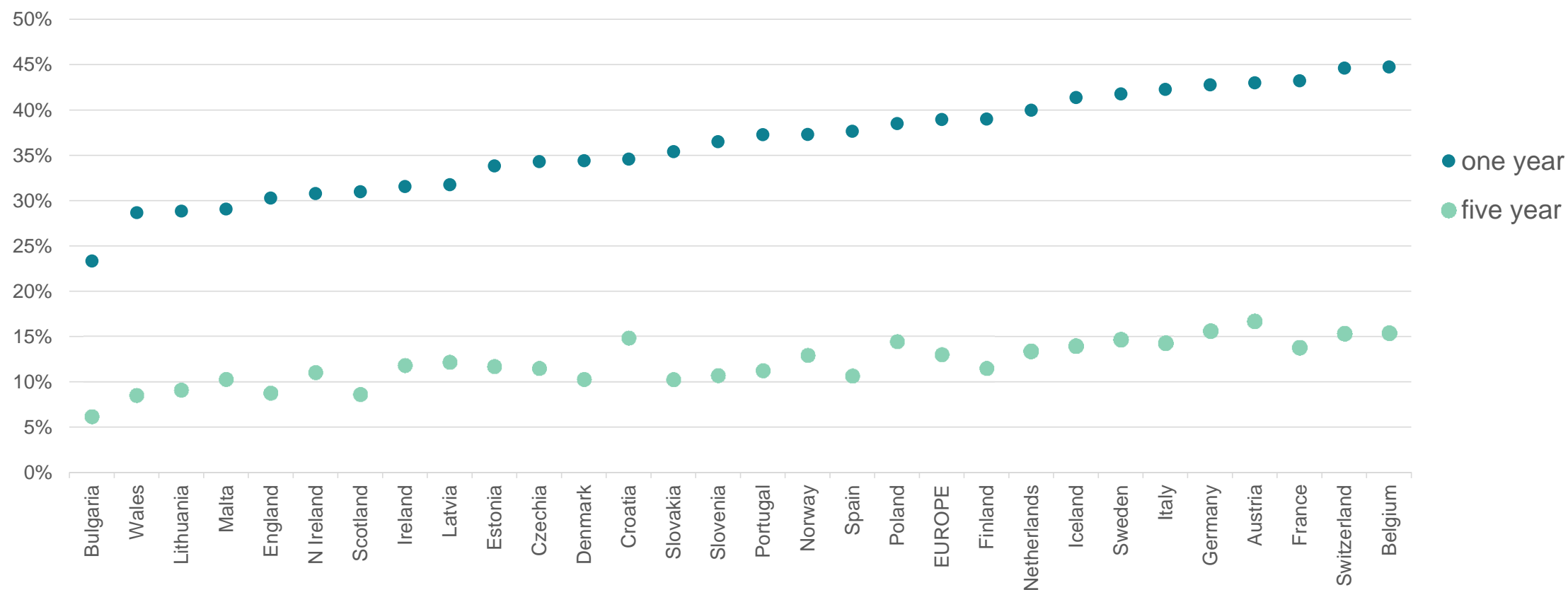
# Incidence of lung cancer in Europe in 2018



# Age specific incidence of lung cancer by sex



# Relative survival of lung cancer (2000-2007)





## **Risk factors & Symptoms**

# Risk factors

- Smoking
- Radiation
- Radon
- Small dust particles
- Asbestos



# Symptoms

- Often no or only aspecific symptoms such as weight loss, fever, loss of appetite or fatigue
- Cough, hemoptoë
- Short of breath, stridor
- Pain on the chest
- Atelectasis (collapse of the lung)
- Hoarseness

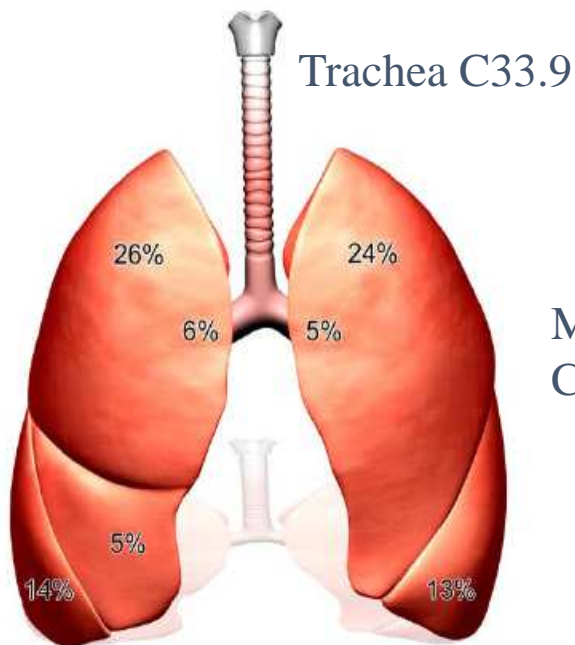
*Absence of symptoms is the main reason for the high stage at diagnosis*





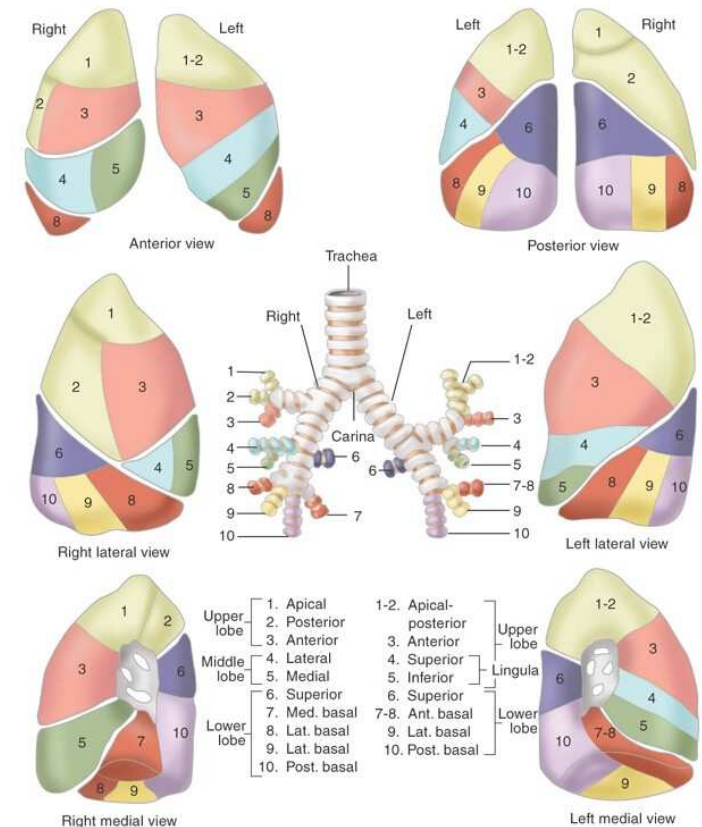
# Topography

# 5 lobes (2 left and 3 right) which are composed of a total of 20 segments



Main bronchus  
C34.0

Overlapping C34.8  
NOS C34.9



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# Morphology

# New morphology codes/terms in ICD-O-3

Code	Term
8250/2	Adenocarcinoma in situ, non-mucinous
8253/2	Adenocarcinoma in situ, mucinous
8250/3	Bronchiolo-alveolar adenocarcinoma → Lepidic adenocarcinoma
8256/3	Minimally invasive adenocarcinoma, non-mucinous (C34._)
8257/3	Minimally invasive adenocarcinoma, mucinous (C34._)
	Bronchiolo-alveolar adenocarcinoma = Adenocarcinoma of the lung

# Overview

Term	ICD-O-3 2nd revision
Adenocarcinoma in situ, non-mucinous	8250/2
Adenocarcinoma in situ, mucinous	8253/2
Lepidic adenocarcinoma (Bronchiolo-alveolar carcinoma, NOS)	8250/3
Bronchiolo-alveolar carcinoma, non-mucinous	8252/3
Bronchiolo-alveolar carcinoma, mucinous	8253/3
Bronchiolo-alveolar carcinoma, mixed mucinous and non-mucinous	8254/3
Minimally invasive adenocarcinoma, non-mucinous	8256/3
Minimally invasive adenocarcinoma, mucinous	8257/3

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# Morphology: clinical

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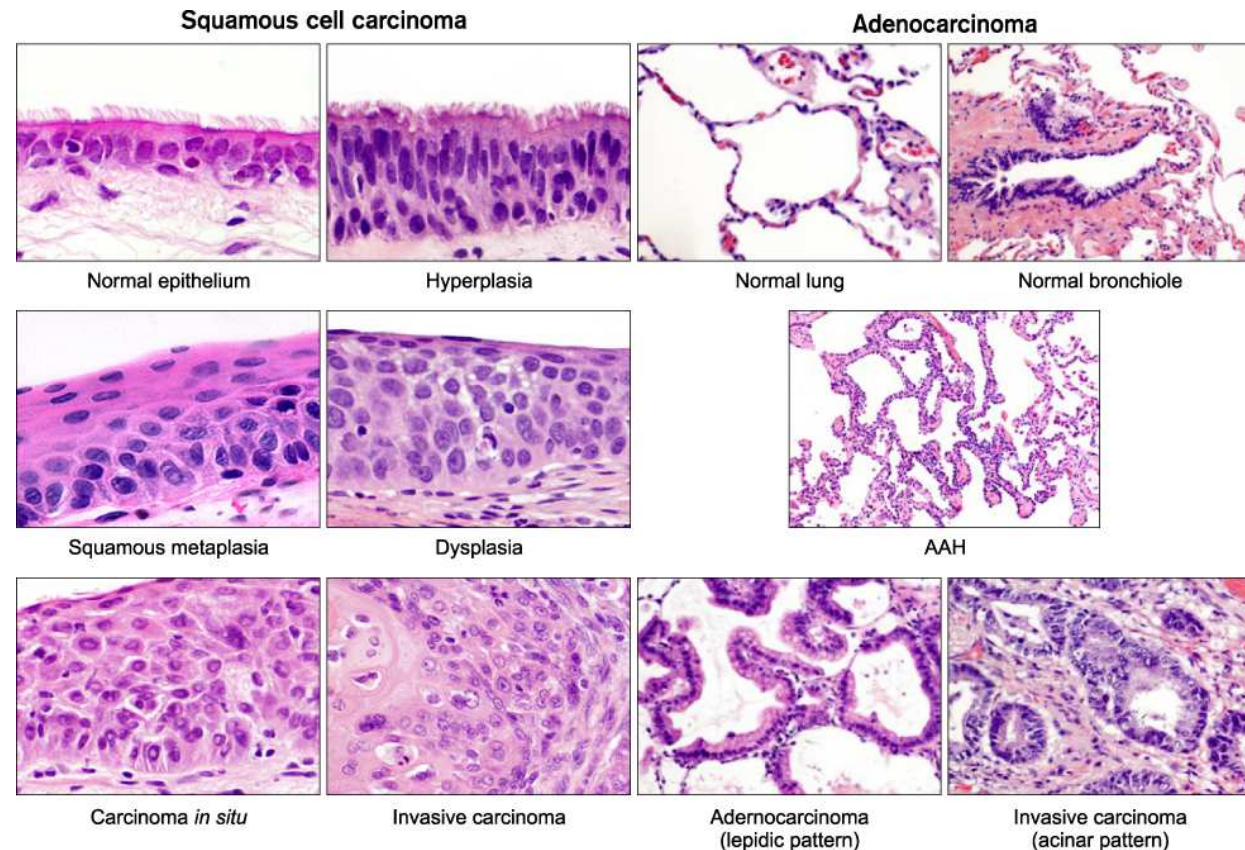
- Small cell carcinoma
- Non-small cell carcinoma
  - Squamous cell carcinoma
  - Adenocarcinoma
  - Large cell carcinoma

# Morphology: pathological

- Neuro-endocrine tumours/carcinomas
  - Carcinoid/NET gr 1
  - Atypical carcinoid/NET gr 2
  - Large cell neuro-endocrine carcinoma
  - Small cell carcinoma
- Non-epithelial cancers
  - Sarcoma
- Non-small cell carcinoma
  - Squamous cell carcinoma
  - Adenocarcinoma
  - Large cell carcinoma
  - Rare carcinoma subtypes
- Unspecified cancers  
(no pathology)

# Morphology and topography

- Squamous cell carcinoma and small cell carcinoma are mostly located in the central parts of the lung (main bronchus and its branches)
- Adenocarcinoma is mostly located in more peripheral parts of the lung (the alveoli of the lung)

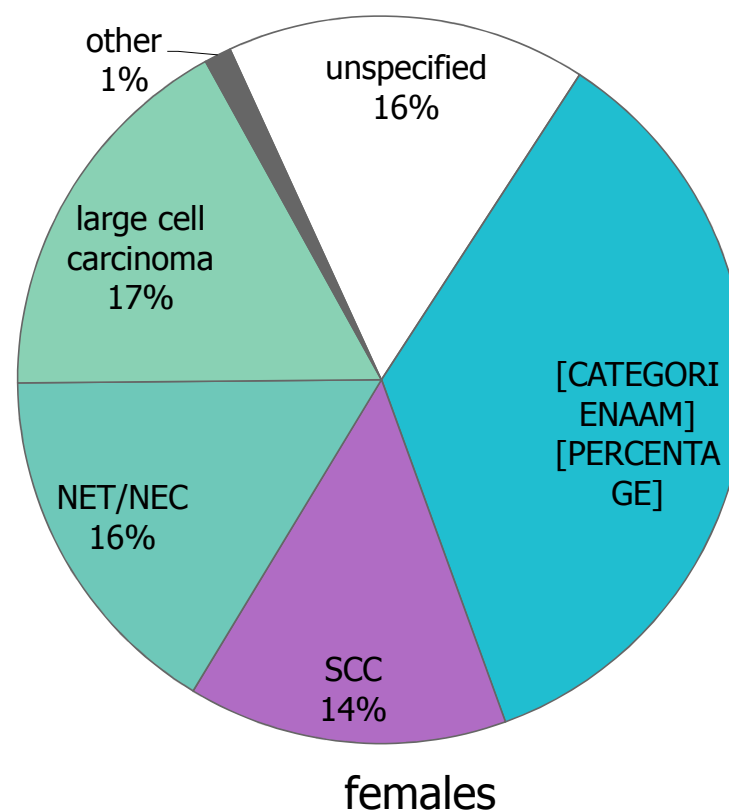
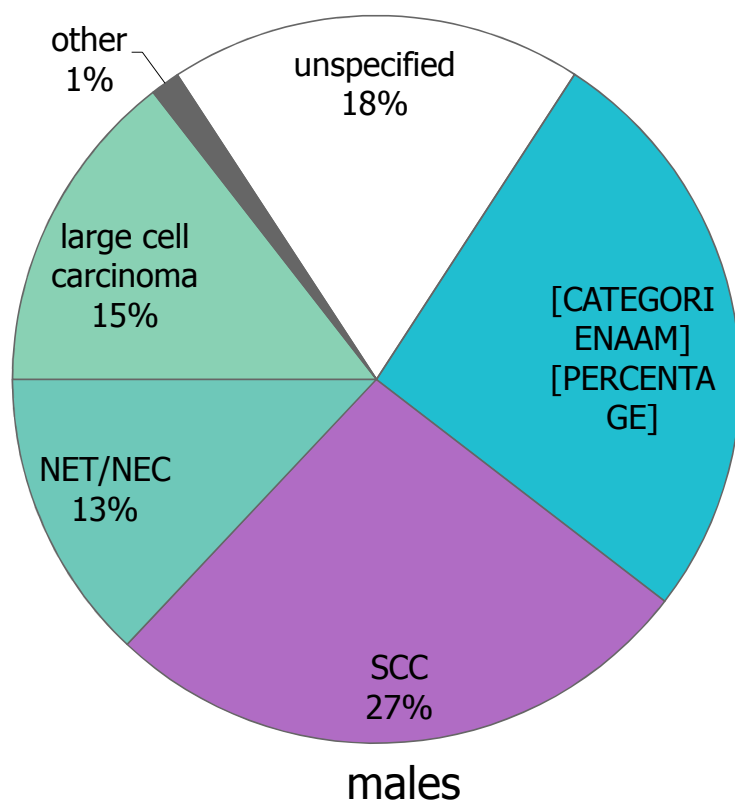




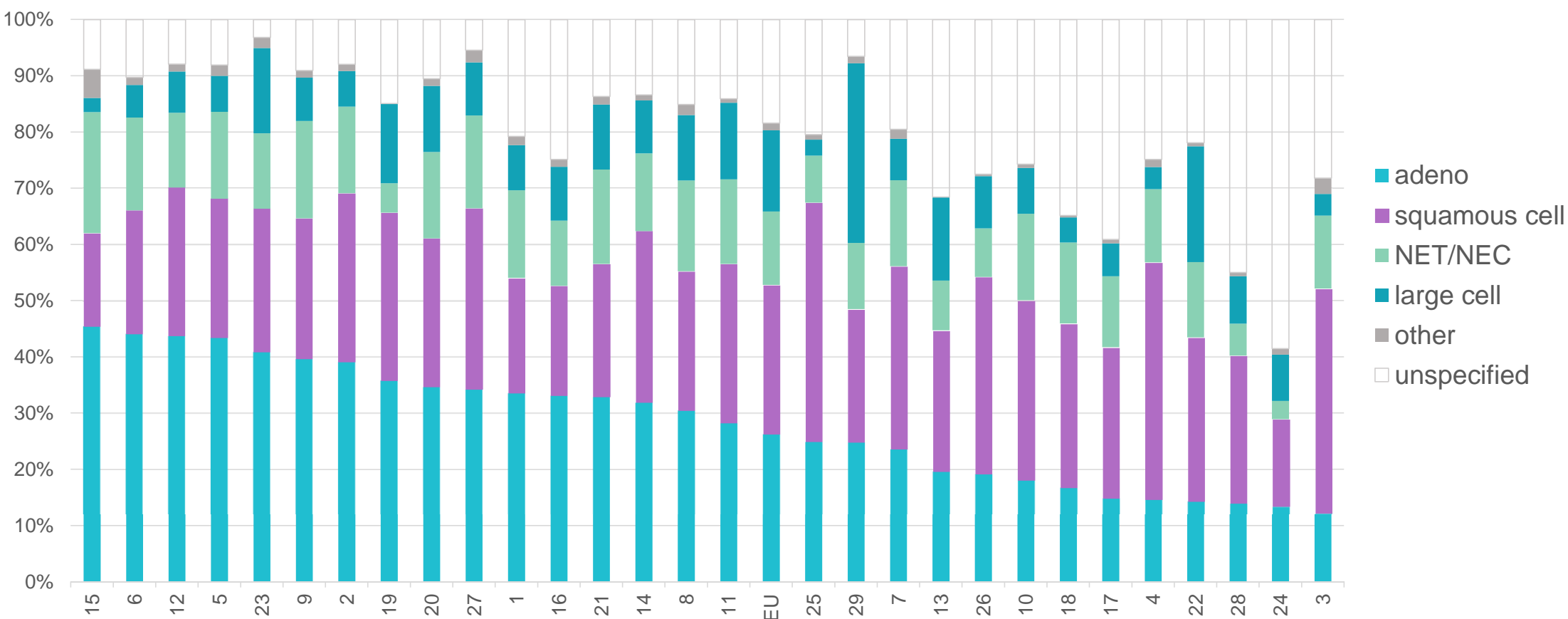
# Large cell carcinoma & carcinoma, NOS

- Large cell carcinoma (8012) is not really a subtype, but only descriptive ('large cells')
- Adenocarcinoma and squamous cell carcinoma have also large cells
- If next to large cell carcinoma another diagnosis is available, the more specific one has preference
- Try also to avoid the use of 'carcinoma, NOS' (8010) and 'non-small cell lung cancer' (8046)

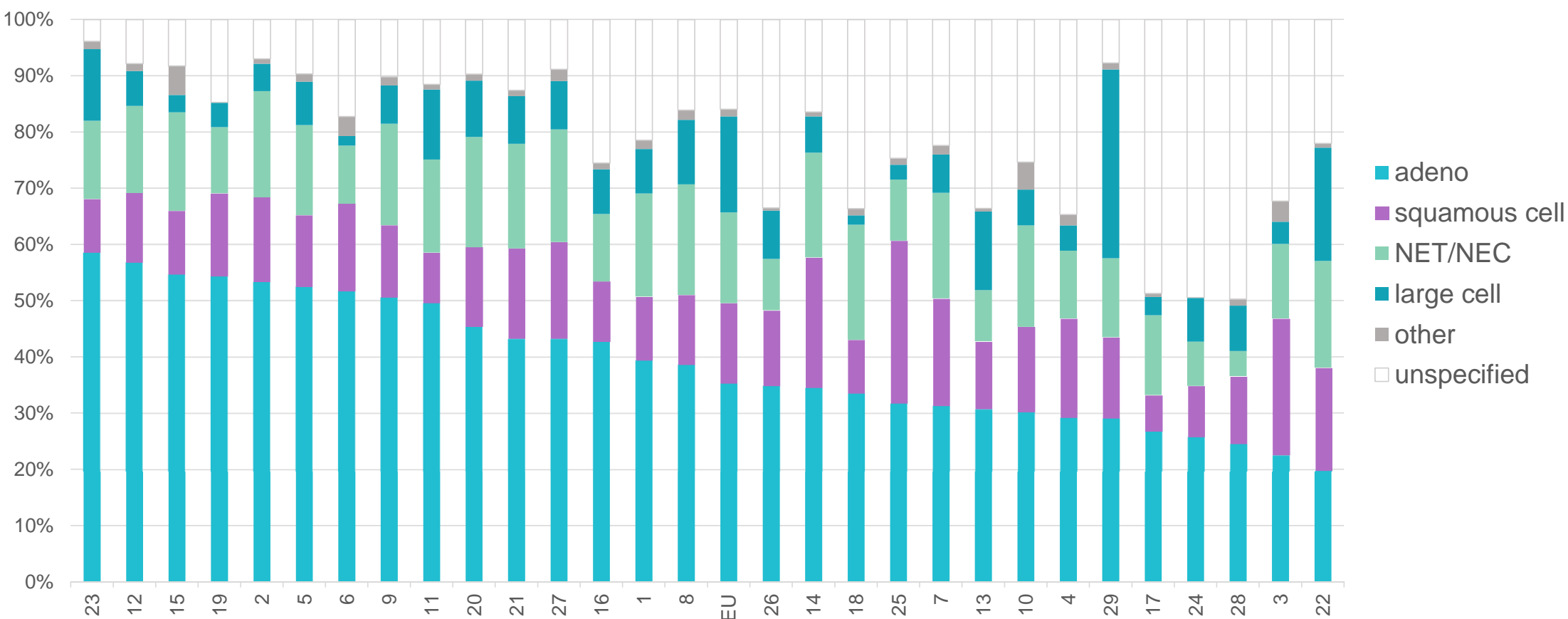
# Morphology: distribution by sex (EU 2012)



# Morphology by country: males



# Morphology by country: females



# Morphology: subtypes of adenocarcinoma

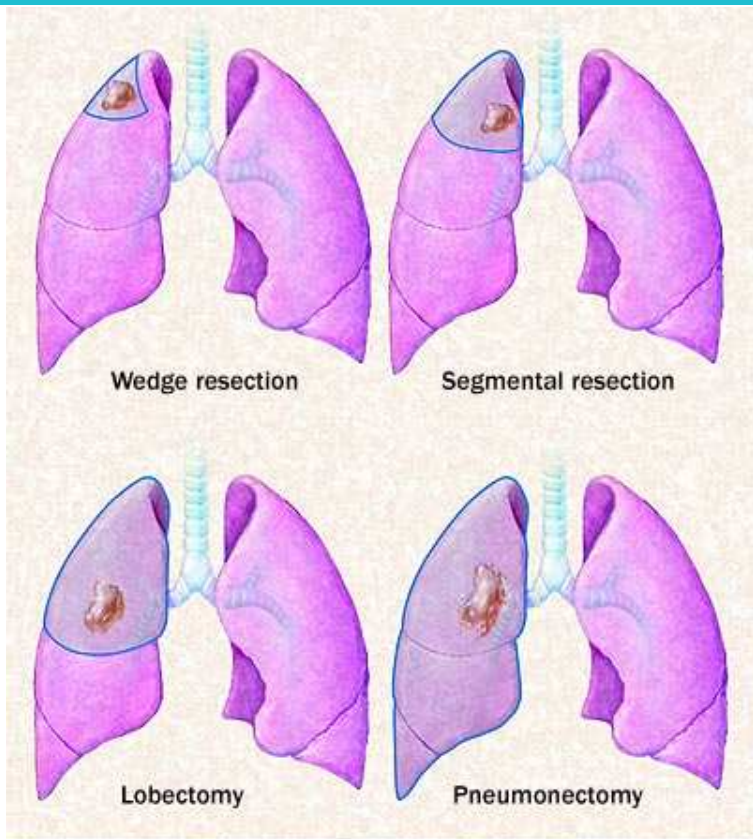
- Adenocarcinoma
  - Acinar (8550)
  - Bronchiolo-alveolar/lepidic (8250); mucinous (8253); non-mucinous (8252); mixed (8254)
  - Mucinous (8480/8481)
  - Papillary (8260)
  - Solid (8230)
  - Rare types
- Salivary gland tumours
  - Muco-epidermoid (8430)
  - Adenoid cystic (8200)
  - Epithelial-myoepithelial (8562)



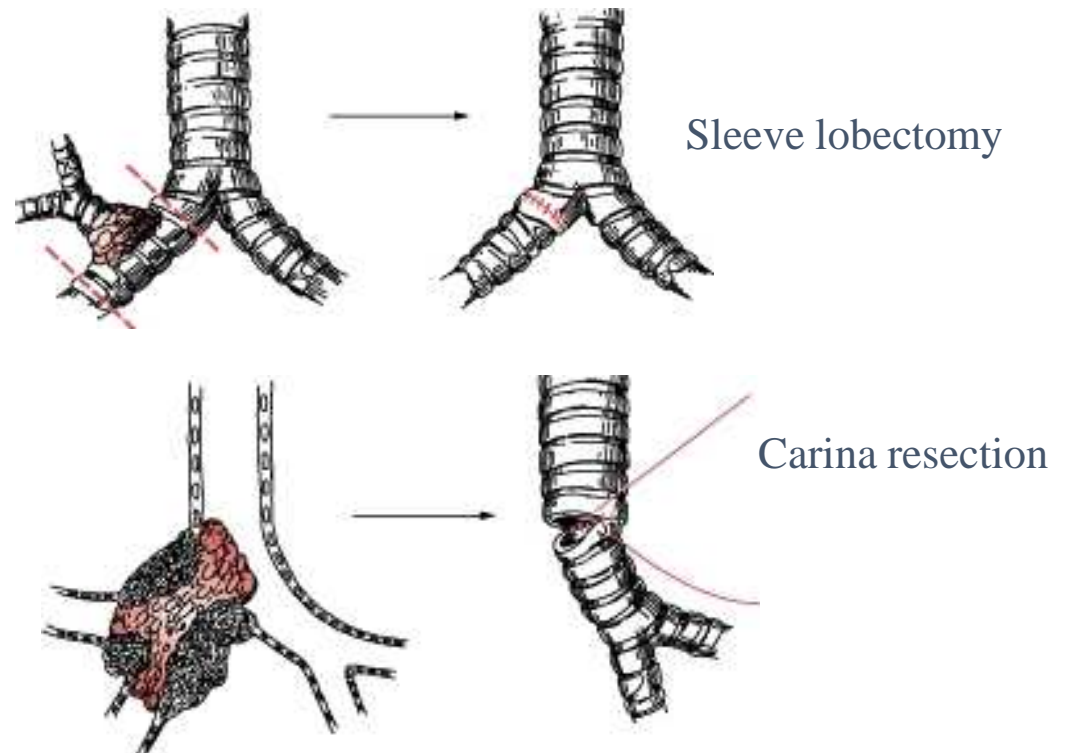
# Treatment

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- 
- Stage I & II: surgery / radiotherapy
  - Stage III: chemoradiotherapy
  - Stage IV: systemic treatment (chemotherapy or targeted therapy), palliative radiotherapy

# Surgery



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# Targeted therapy

- A number of drugs have been developed or are being developed that target several processes in the cancers cells
- Depending on the type of aberration in the cancer cell the drug will be effective (or not)
- Resistance to the drug often develops after some time as the cancer cells may change at cell division





# EXERCISES



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