

# Oncological diseases

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## Teaching lesson 1

Written by: Zdeňka Smejkalová, Jitka Slaná Reissmannová

# Neoplastic diseases

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**neoplastic diseases = oncological diseases**

- A neoplastic disease is defined as a growth of tissue, which is out of control and grows independently of the organism.
- Oncology
  - Medical branch that deals with the issue of neoplastic diseases
  - Derived from the Greek *onkos* = crab

# Basic terms

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## Non-malignant = benign tumours

- Uncontrolled cell division
- Slow growth
- Delimited structure
- Do not spread through the surrounding tissues
- Pressure on the surrounding tissues
- Surgical removal
- No secondary tumours

## Malignant tumours

- Uncontrolled cell division
- Aggressive growth
- Damage and pressure on the surrounding tissues
- Surgical removal
- Spread through the surrounding tissues
- Development of metastases
- Spread through blood and lymphatic channels
- Death of the organism

# Basic terms

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## Metastasis

= new secondary (subsidiary) source of malignant tumour.

## Risk factor

= factor that increases the probability of the onset of neoplastic disease.

- Internal and external risk factors

# Risk factors

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Risk factor	Increased risk of neoplastic disease
Smoking	Lung cancer, oral cavity cancer, pharynx cancer, larynx cancer, oesophagus cancer Pancreatic cancer, urinary system cancer
Alcohol	Oral cavity cancer, pharynx cancer, larynx cancer, oesophagus cancer Colon cancer, liver cancer, breast cancer
Poor diet	Colorectal cancer, stomach cancer, prostate cancer, lung cancer Breast cancer, uterine cancer
Overweight, obesity	Uterine cancer, breast cancer, colorectal cancer, gall bladder cancer
HPV infection	Cervical cancer
UV radiation	Skin cancer

# Risk factors

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- Other risk factors include:
    - Decreased physical activity
    - Stress
    - Frequent menstruation
    - Late or no pregnancy
    - Short-term or no breastfeeding
    - Inheritance
    - Age
    - Gender
- } Internal risk factors

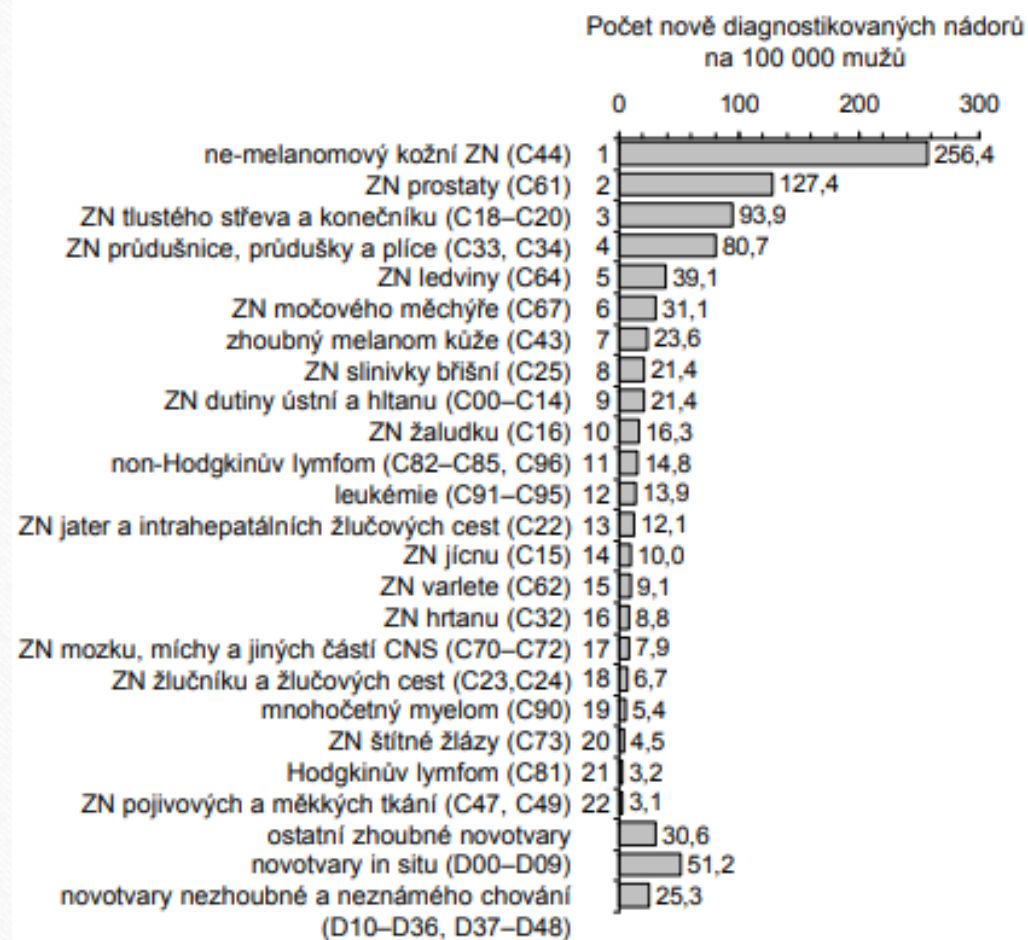
# Neoplastic diseases in the Czech Republic

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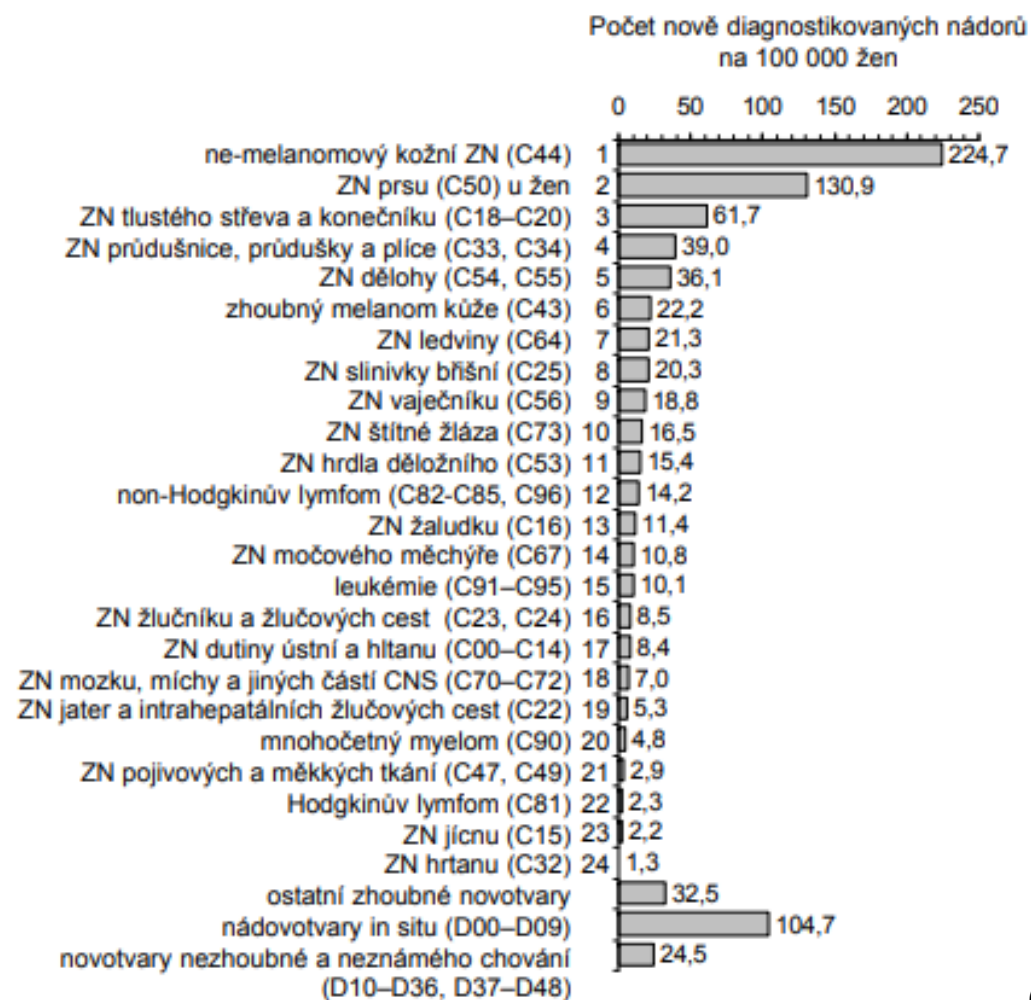
The second most frequent cause of death!

- Most frequent neoplastic diseases
  - Skin cancer
  - Prostate cancer in men, breast cancer in women
  - Colorectal cancer
  - Lung cancer

### 1a. Incidence 2014, muži

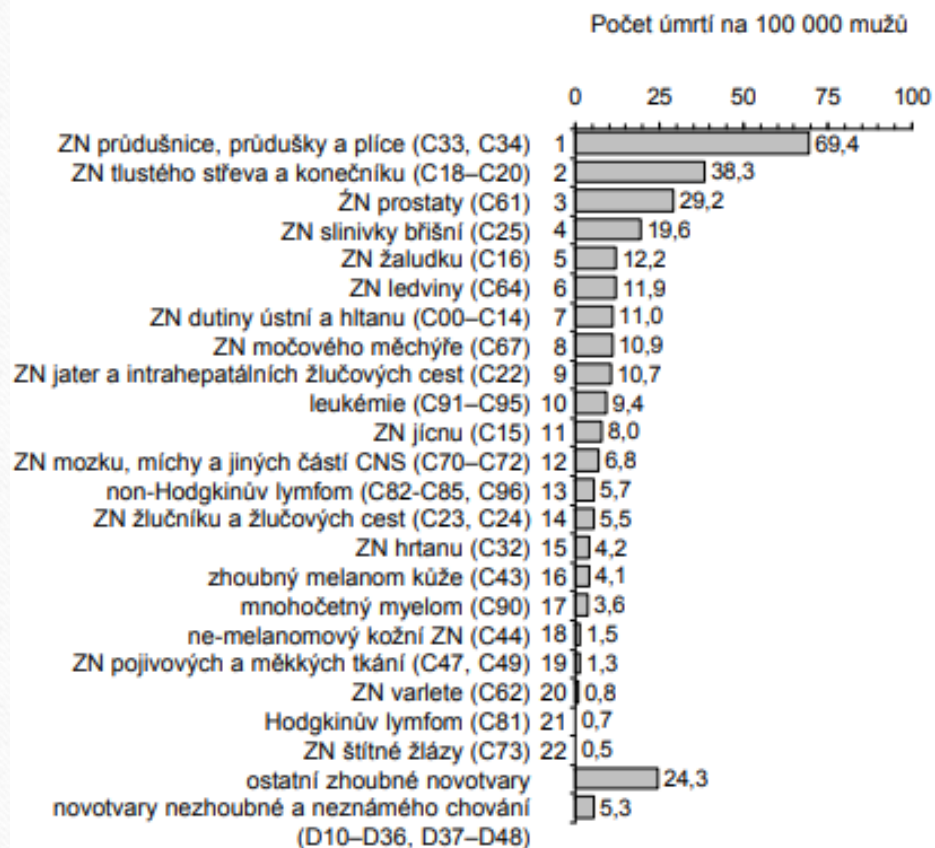


### 1b. Incidence 2014, ženy

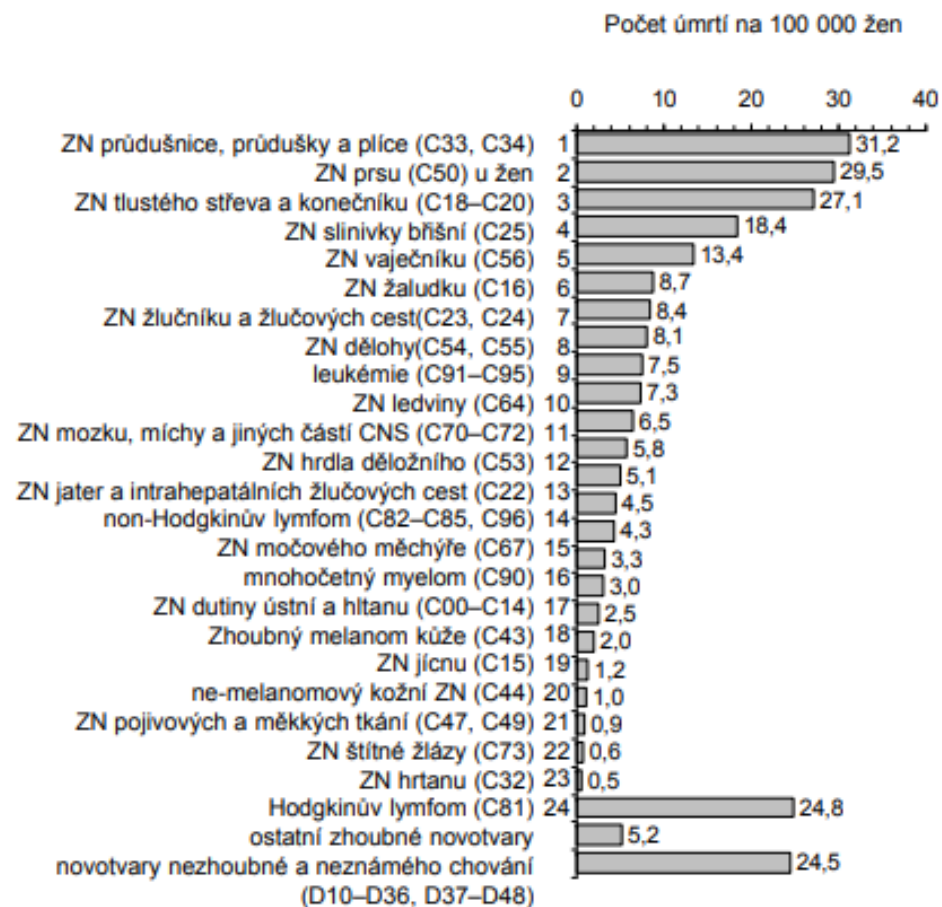




### 1c. Mortalita 2014, muži



### 1d. Mortalita 2014, ženy



# References

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## Figures:

- (1), (2): *Novotvary 2015 ČR* [online]. Praha: Ústav zdravotnických informací a statistik ČR, 2015. [cit. 2018-04-30]. Retrieved from: <http://www.uzis.cz/publikace/novotvary-2015>