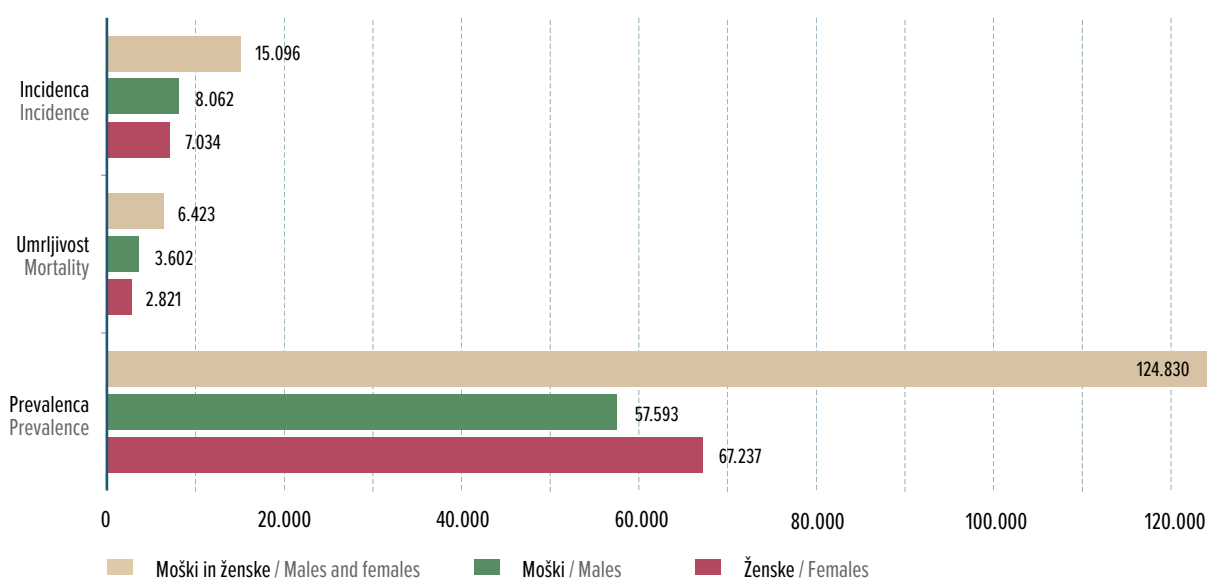


# Rak v Sloveniji

Za dodatne podatke o bremenu raka v Sloveniji in svetu obiščite [www.slora.si](http://www.slora.si).

- Med rojenimi leta 2020 bosta do svojega 75. leta starosti za rakom predvidoma zbolela eden od dveh moških in ena od treh žensk.
- Za rakom zboli letno približno 16.000 Slovencev, več kot 8.000 moških in več kot 7.000 žensk, umre pa jih več kot 6.000, približno 3.500 moških in nekaj manj kot 3.000 žensk; med nami živi že več kot 120.000 ljudi, ki so kadarkoli zboleli zaradi ene od rakavih bolezni (prevalenca).
- Leta 2020, v prvem letu epidemije Covid-19, je bilo diagnosticiranih 11 % manj rakov kot je bilo pričakovano. Največji manko diagnoz je bil pri nemelanomskem kožnem raku, rakah prostate, dojke in pljuč ter pri hematoloških rakah.
- Ogroženost z rakom je največja pri starejših; med vsemi bolniki z rakom, zbolelimi leta 2020, je bilo 65 % starejših od 65 let. Ker se slovensko prebivalstvo stara, je samo zaradi vedno večjega deleža starejših pričakovati, da se bo število novih primerov raka še večalo.
- Najpogostejši raki pri nas (kože, pljuč, dojke, prostate ter debelega črevesa in danke) so leta 2020 predstavljali 58 % vseh ugotovljenih rakov. Ti raki so povezani z nezdravim življenjskim slogom: kajenjem, čezmernim pitjem alkoholnih pijač, neustrezno prehrano, premalo gibanja in posledično prekomerno težo ter čezmernim sončenjem. Ogroženost z njimi je treba zmanjšati z ukrepi primarne preventive.
- Presejalni programi za rake, ki jih priporoča Svet Evropske unije in smo jih uvedli tudi v Sloveniji, so z zgodnjim odkrivanjem že zmanjšali umrljivost za rakom dojke, debelega črevesa in danke ter rakom materničnega vratu; pri slednjih dveh so zmanjšali tudi incidenco.
- Petletno čisto preživetje odraslih slovenskih bolnikov s katerokoli vrsto raka (brez nemelanomskega kožnega), ki so zboleli v obdobju 2016–2020, je bilo 58 %, bolnic pa 62 %.

Povzetek



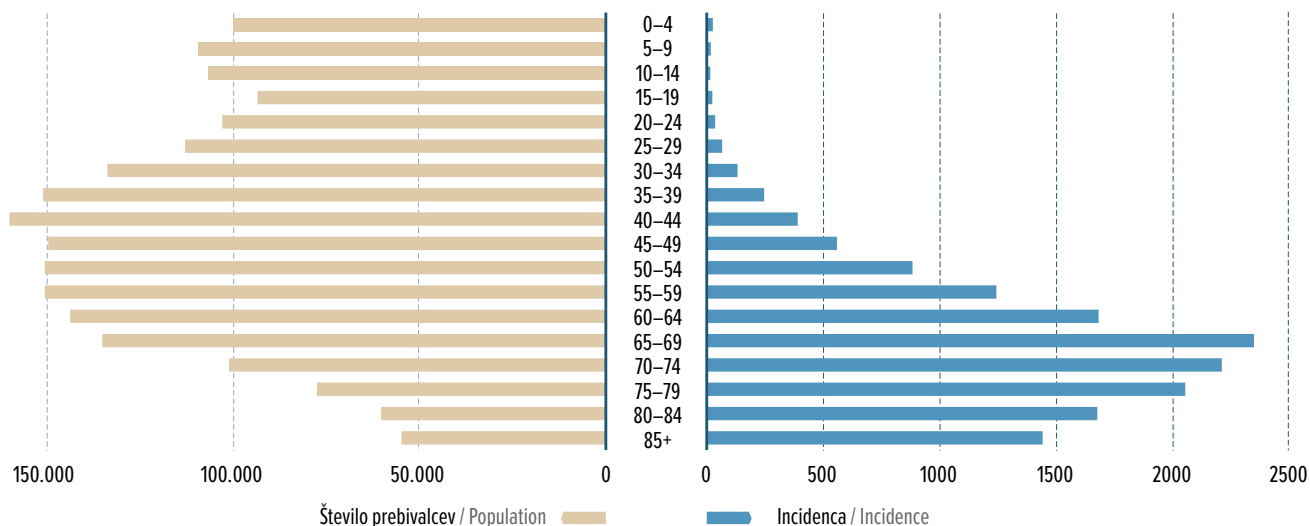
Slika 1. Breme raka, Slovenija 2020.  
Figure 1. Cancer burden, Slovenia 2020.

## Osnovni podatki o raku v Sloveniji 2020

- Leta 2020 je v Sloveniji za rakom zbolelo 15.096 ljudi (8.062 moških in 7.034 žensk).
- Starostno standardizirana incidenčna stopnja (evropsko prebivalstvo) je bila 465,5/100.000; 531,9 pri moških in 420,3 pri ženskah. Med rojenimi leta 2020 bosta do svojega 75. leta starosti za rakom predvidoma zbolela eden od dveh moških in ena od treh žensk.
- Leta 2020 je za rakom umrlo 6.423 Slovencev, 3.602 moških in 2.821 žensk. Med nami je živel 124.830 ljudi (57.593 moških in 67.237 žensk), ki so kadarkoli zboleli za eno od rakavih bolezni (prevalenca).
- Med posameznimi slovenskimi regijami ne opažamo bistvenih razlik v bremenu raka.

## Starost bolnikov

- Čeprav se ogroženost z rakom zmeroma večja, je največja v poznejši starosti; med vsemi onkološkimi bolniki je leta 2020 kar 67 % moških in 62 % žensk zbolelo po dopolnjeni starosti 65 let. Polovica odstotka vseh rakavih bolezni je bilo ugotovljenih pri otrocih in mladostnikih (do 20. leta).
- Ker se slovensko prebivalstvo stara, je samo zaradi čedalje večjega deleža starejših pričakovati, da se bo število novih primerov raka še večalo. Ocenjujemo, da bomo leta 2023 zabeležili že 17.046 novih bolnikov.

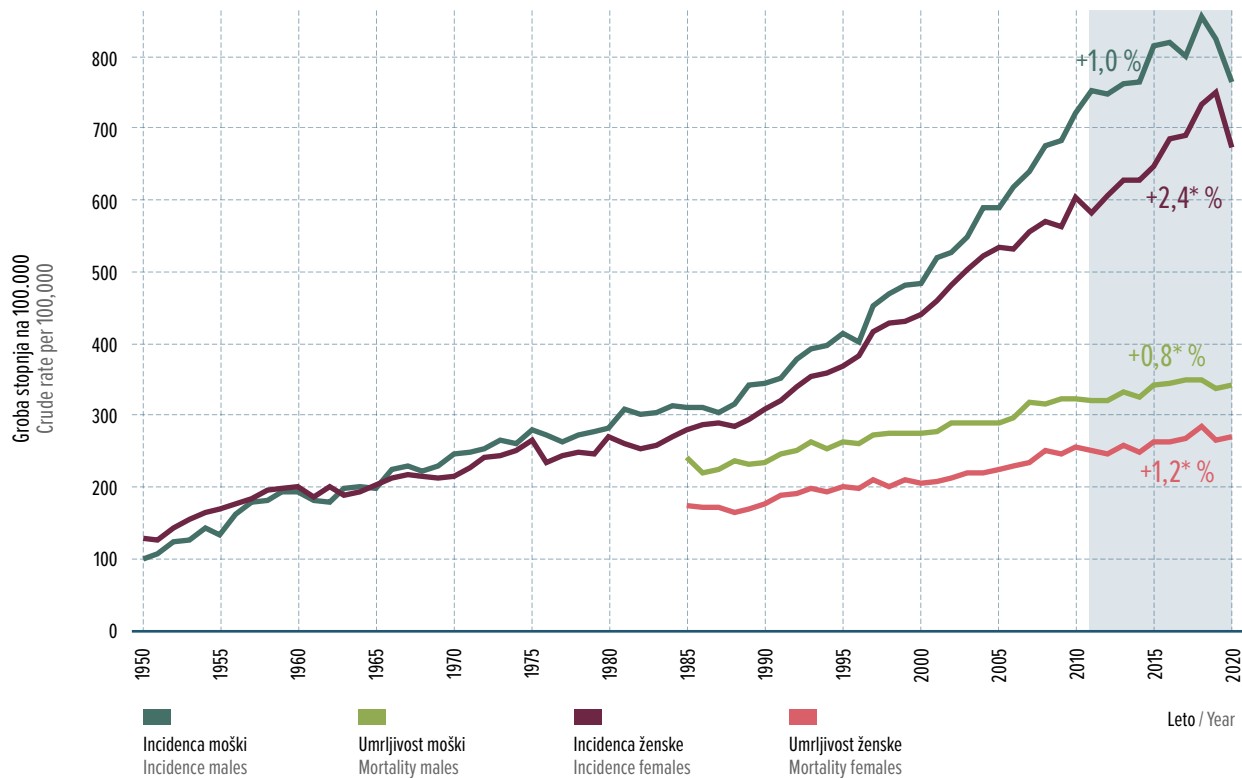


Slika 2. Število novih primerov vseh rakov (desna stran) po starosti ter primerjava s številom prebivalcev (leva stran) v istih starostnih skupinah, Slovenija 2020.

Figure 2. Number of new cancer cases (right side) by age and comparison with the population numbers (left side) in the same age groups, Slovenia 2020.

## Časovni trend

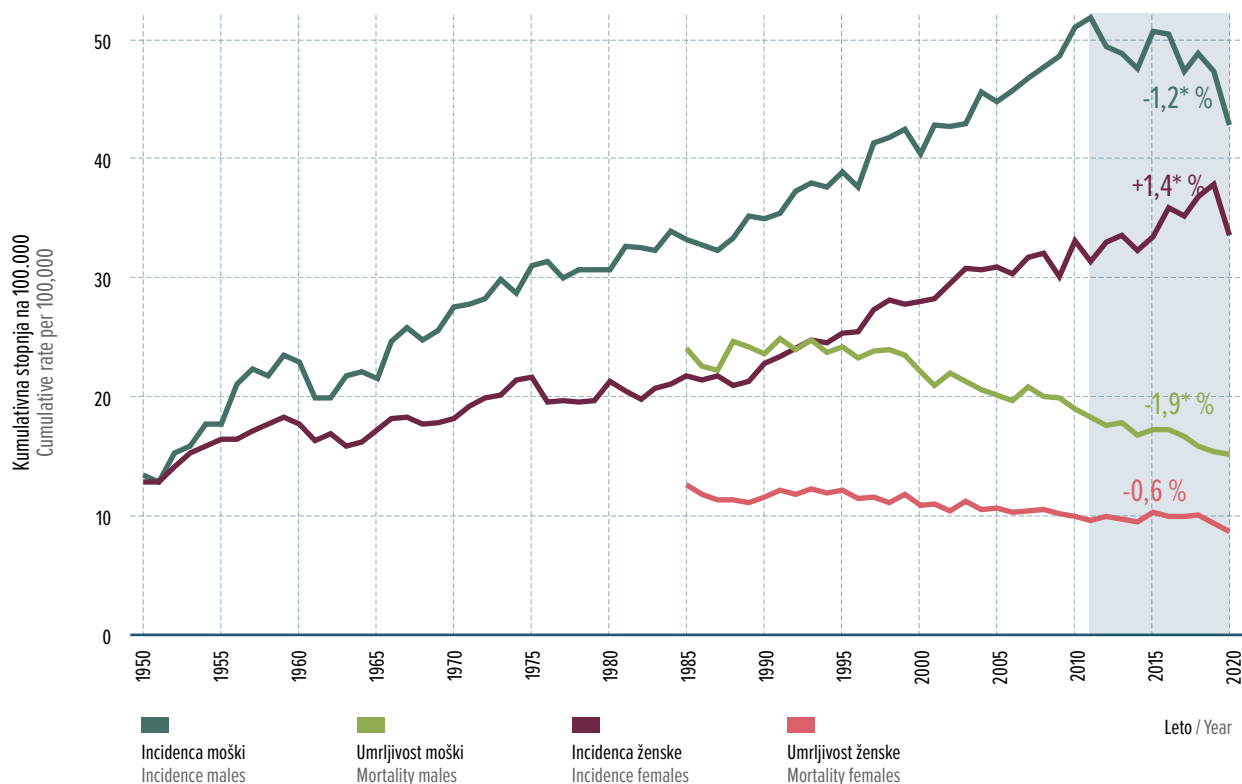
- V splošnem se groba incidenčna in umrljivostna stopnja raka večata, vendar pa smo v letu 2020, prvem letu epidemije Covid-19, zabeležili 11 % padec v številu novih primerov raka.
- Groba incidenčna stopnja se je v zadnjih 20 letih skoraj podvojila, v zadnjem desetletju se večja za 1,6 % povprečno letno (1,0 % pri moških in 2,4 % pri ženskah). Groba umrljivostna stopnja se je pri moških v zadnjih 10 letih večala povprečno za 0,8 % letno, pri ženskah pa za 1,2 %.
- Več kot polovico tega povečanja lahko pripišemo staranju prebivalstva, saj z daljšo življenjsko dobo lahko tudi več ljudi dočaka to bolezen. Starostno standardizirana kumulativna incidenčna stopnja kaže, da se tveganje raka večja počasneje, pri moških se trend celo obrača navzdol. Spodbudno je tudi, da se umrljivost zaradi raka (če ne upoštevamo staranja prebivalstva) manjša, predvsem od sredine devetdesetih let, kar kaže na večjo uspešnost zdravljenja.



\* Povprečna letna sprememba je statistično značilna pri stopnji tveganja 0,05 / Average annual change is statistically significant at 0.05 significance level

Slika 3. Groba letna incidenčna in umrljivostna stopnja vseh rakov po spolu s povprečno letno spremembo za zadnjih 10 let, Slovenija 1950–2020.

Figure 3. Crude annual incidence and mortality rates for all cancer sites by sex with average annual change in last 10 years, Slovenia 1950–2020.



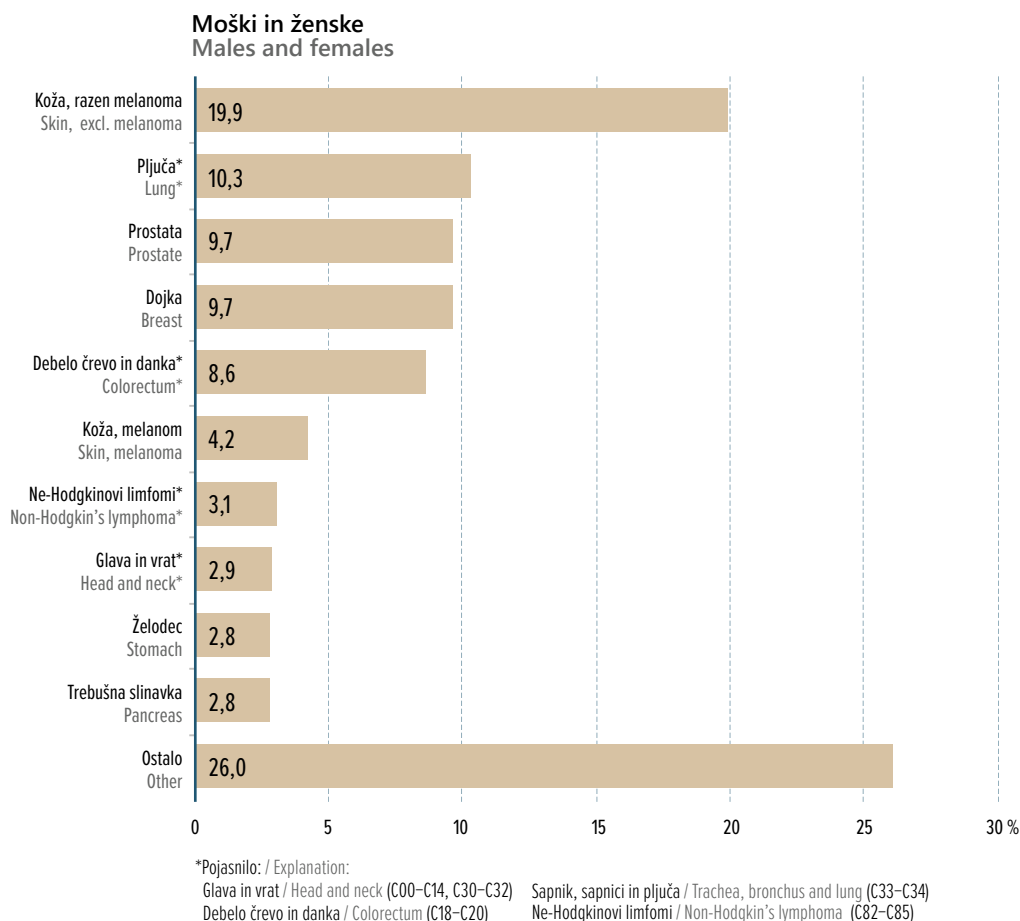
\* Povprečna letna sprememba je statistično značilna pri stopnji tveganja 0,05 / Average annual change is statistically significant at 0.05 significance level

Slika 4. Kumulativna incidenčna in umrljivostna stopnja vseh rakov po spolu s povprečno letno spremembo v zadnjih 10 letih, Slovenija 1950–2020.

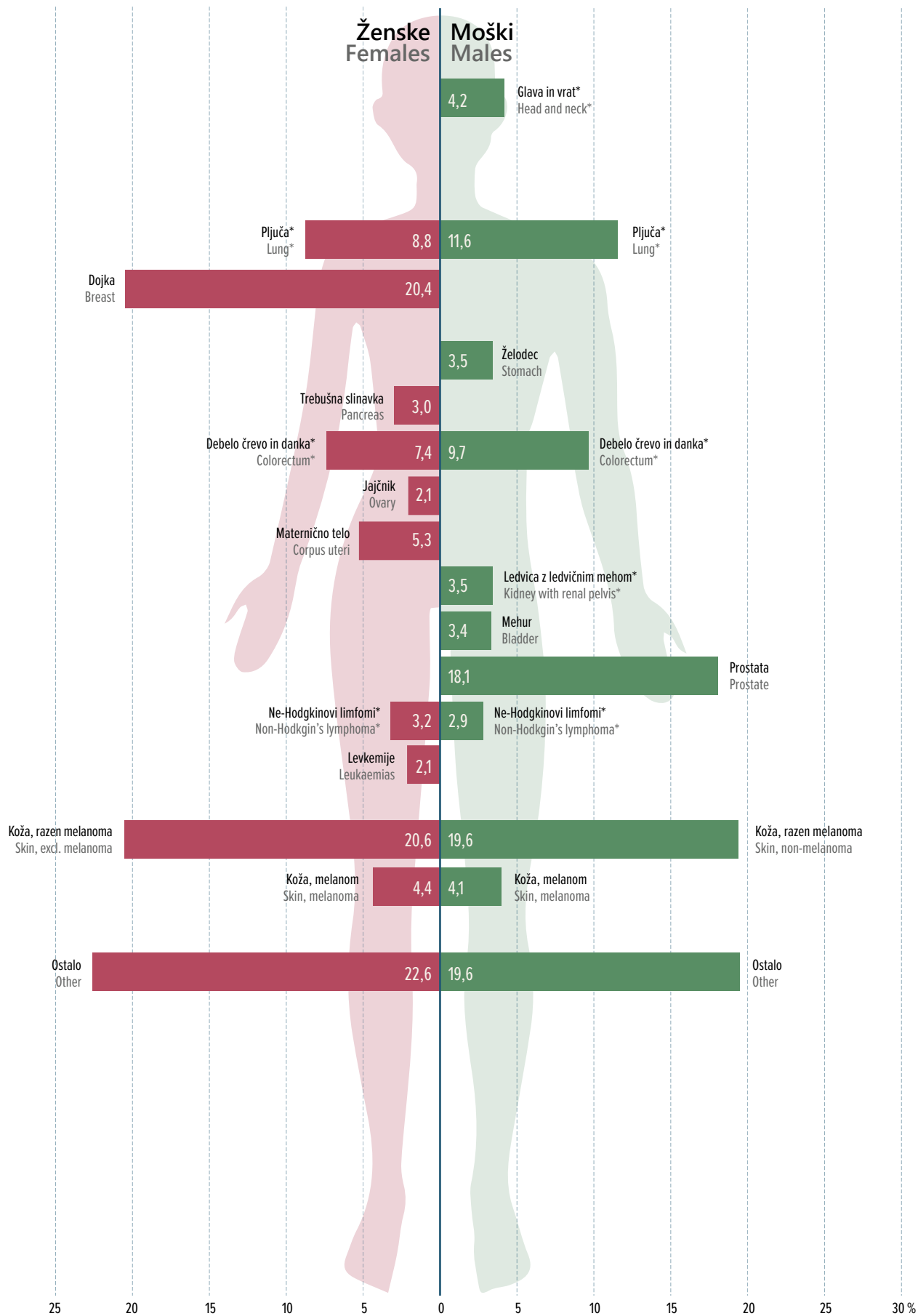
Figure 4. Cumulative annual incidence and mortality rates for all cancer sites by sex with average annual change in last 10 years, Slovenia 1950–2020.

## Najpogostejši raki

- Rak ni ena sama bolezen, temveč več sto različnih. Te lahko vzniknejo v vseh tkivih in organih človeškega organizma. Razlikujejo se po pogostosti, zdravljenju in izidu, imajo pa tudi različne bolj ali manj znane nevarnostne dejavnike.
- Pet najpogostejših vrst raka pri nas – kožni (brez melanoma), pljuč, dojke, prostate ter raki debelega črevesa in danke – obsega 58 % vseh novih primerov rakavih bolezni.
- Najpogostejši raki so povezani z nezdravim življenjskim slogom: kajenjem, čezmernim pitjem alkoholnih pijač, neustrezno prehrano, premalo gibanja in posledično prekomerno težo ter čezmernim sončenjem. Ogroženost z njimi je treba zmanjšati z ukrepi primarne preventive.
- Pri moških zavzemata nemelanomski kožni rak in rak prostate vsak približno petino vseh rakov, sledita pljučni rak ter rak debelega črevesa in danke. Pri ženskah je najpogostejši nemelanomski kožni rak, sledi rak dojke, ki predstavlja petino vseh rakov, nato pa še pljučni rak ter rak debelega črevesa in danke.
- Najpogostejši raki se v različnih življenjskih obdobjih pojavljajo različno. Pri otrocih in mladostnikih do 20. leta starosti so najpogostejše levkemije, sledijo jim tumorji centralnega in avtonomnega živčnega sistema in limfomi. Mlajši odrasli (20–49 let) moški zbolevalo največ za rakom mod in kože, pri ženskah v tej starosti pa je na prvem mestu rak dojke.



Slika 5a. Najpogostejše lokacije raka in njihov odstotni delež pri obeh spolih skupaj, Slovenija 2020.  
Figure 5a. The leading cancer sites with percentage distribution for both sexes combined, Slovenia 2020.



\*Pojasnilo / Explanation:

Glava in vrat / Head and neck (C00–C14, C30–C32)

Sapnik, sapnici in pljuča / Trachea, bronchus and lung (C33–C34)

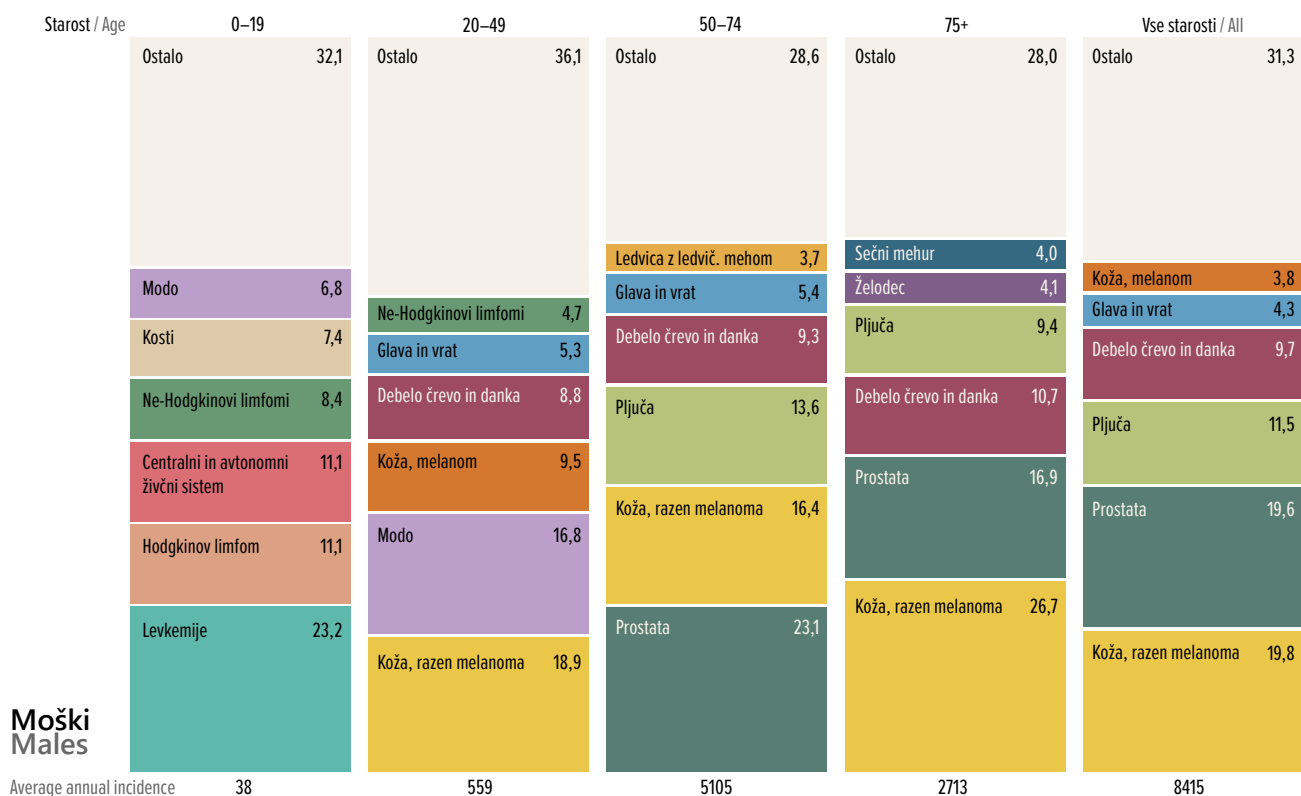
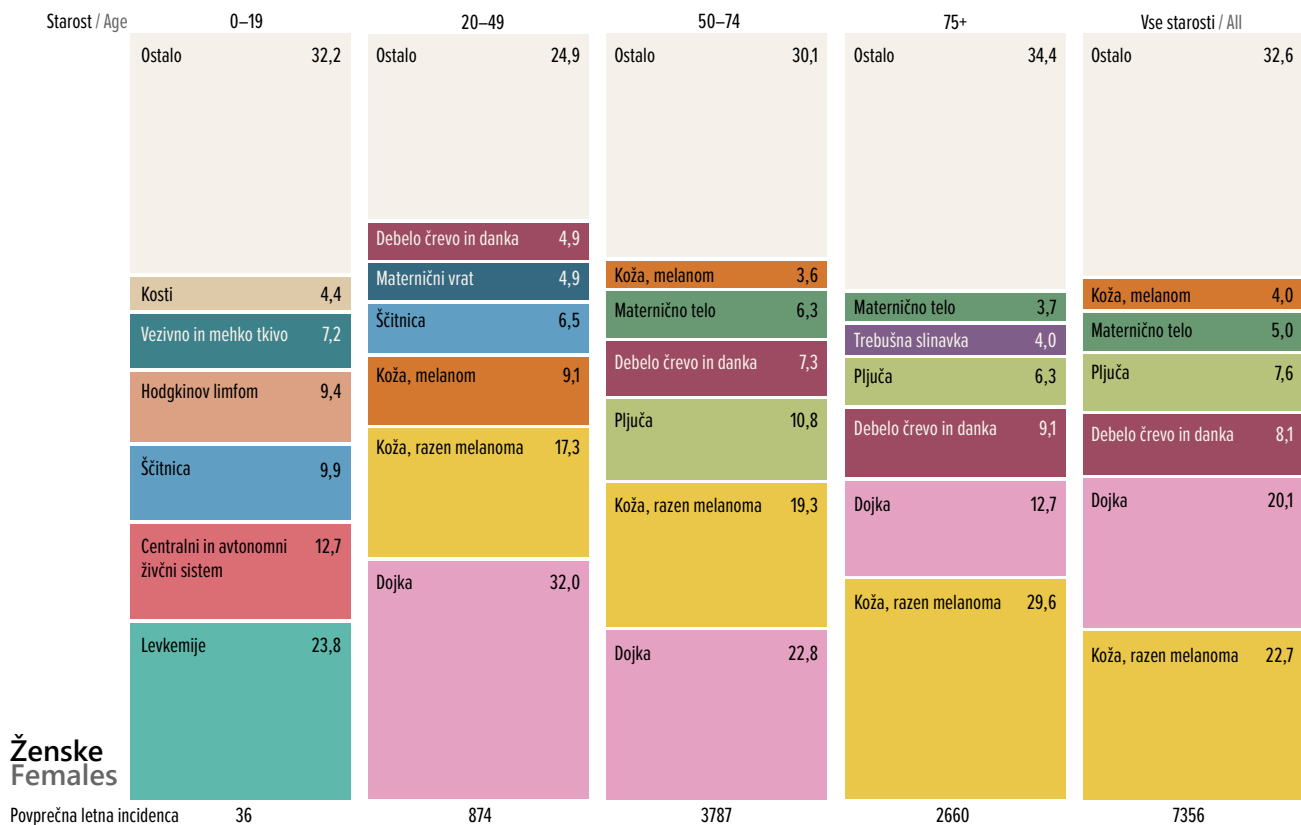
Debelo črevo in danka / Colorectum (C18–C20)

Ledvica z ledvičnim mehonom / Kidney with renal pelvis (C64–C65)

Ne-Hodgkinovi limfomi / Non-Hodgkin's lymphoma (C82–C85)

Slika 5b. Najpogostejše lokacije raka in njihov odstotni delež po spolu, Slovenija 2020.

Figure 5b. The leading cancer sites with percentage distribution by sex, Slovenia 2020.



\*Pojasnilo / Explanation:

Debelo črevo in danka / Colorectum (C18–C20)

Trebušna slinavka / Pancreas (C25)

Pljuča / Lung (C33–C34)

Kosti / Bone (C40–C41)

Koža, melanom / Skin, melanoma (C43)

Koža, razen melanoma / Skin, excl. melanoma (C44)

Veživo in mehko tkivo / Connective and soft tissue (C48–C49)

Glava in vrat / Head and neck (C00–C14, C30–C32)

Dojka / Breast (C50)

Maternični vrat / Cervix uteri (C53)

Maternično telo / Corpus uteri (C54)

Centralni in avtonomi živčni sistem / Central and autonomic nervous system (C70–C72)

Ščitnica / Thyroid gland (C73)

Hodgkinov limfom / Hodgkin's disease (C81)

Levkemije / Leukaemias (C91–C95)

Želodec / Stomach (C16)

Prostata / Prostate (C61)

Modo / Testis (C62)

Ledvica z ledvičnim meh. / Kidney with renal pelvis (C64–C65)

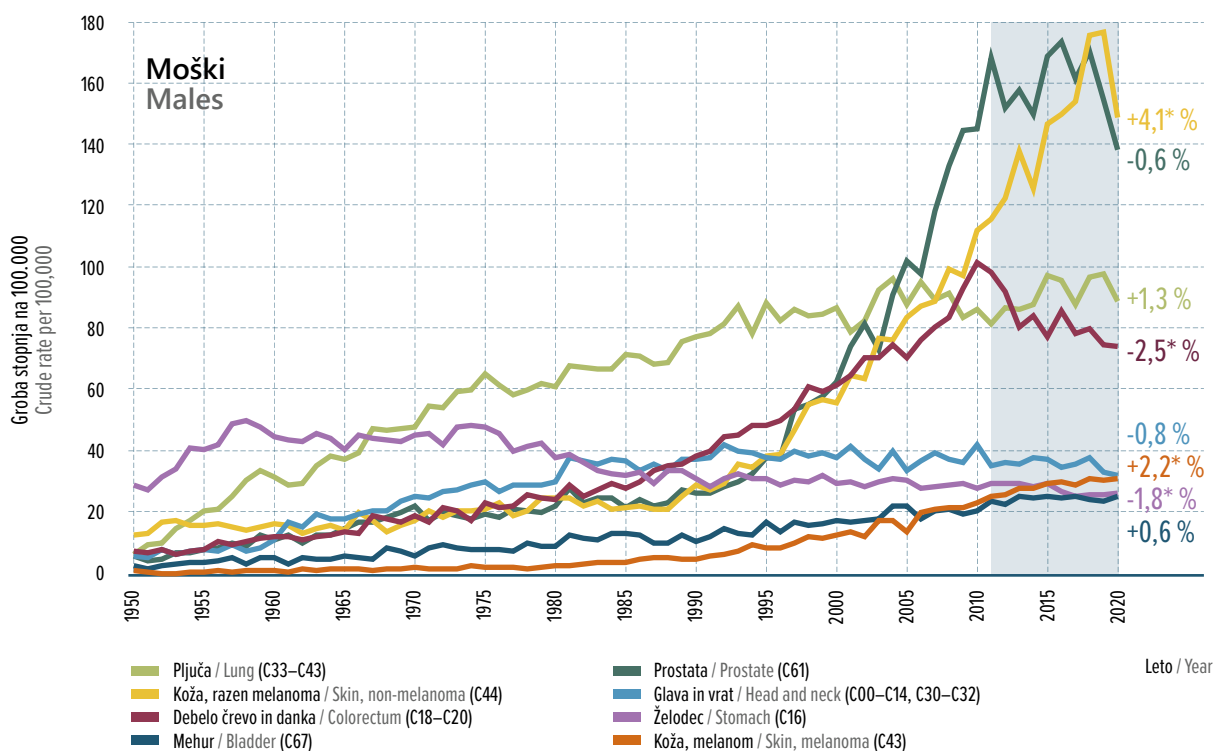
Sečni mehur / Bladder (C67)

Ne-Hodgkinovi limfomi (NHL) / Non-Hodgkin's lymphoma (NHL) (C82–C85)

Slika 6. Odstotni deleži najpogostejših rakov po starostnih skupinah in spolu, Slovenija 2015–2020.  
Figure 6: Percentage distribution of leading cancer sites by age group and sex, Slovenia 2015–2020.

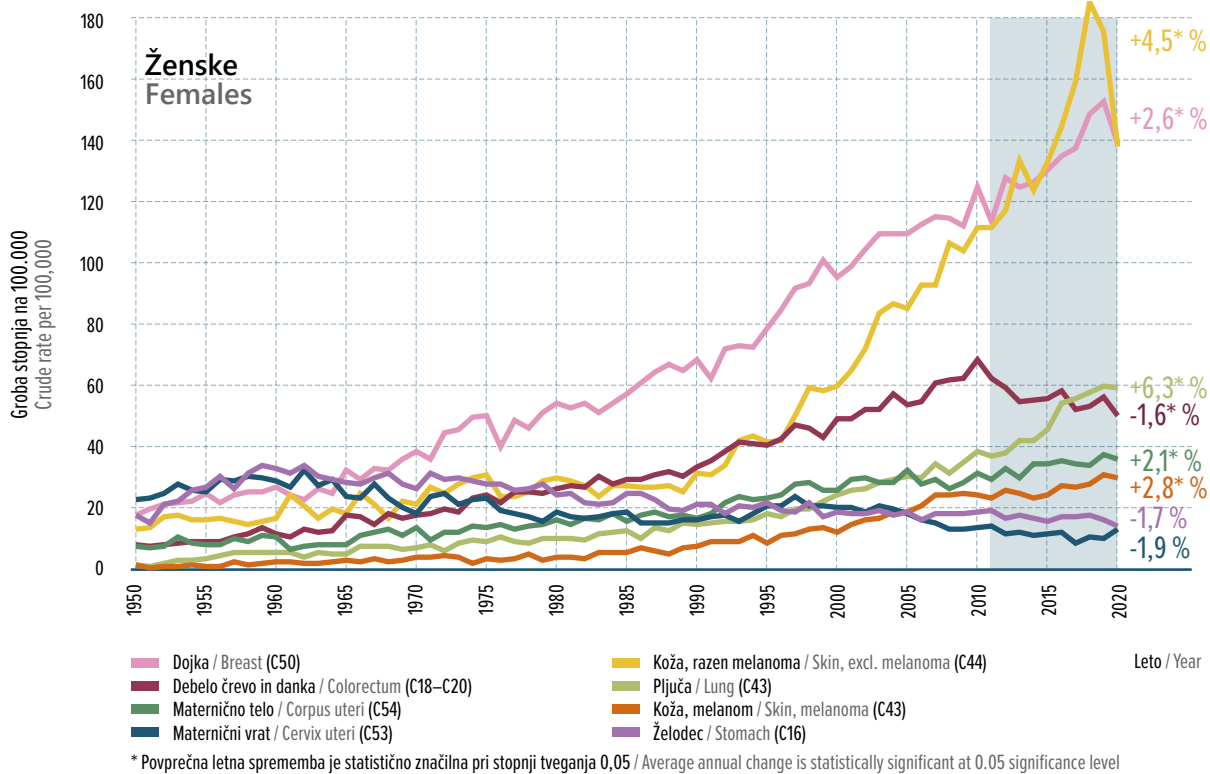
## Trend najpogostejših rakov

- V prvem letu epidemije Covid 2020 je bil največji manko diagnoz pri nemelanomskem kožnem raku, rakah prostate, dojk in pljuč ter pri hematoloških rakah. Nasprotno pa pri rakah debelega črevesa in danke ter pri kožnem melanomu manka ni bilo.
- Med pogostejšimi rakavimi boleznimi pri moških se je incidenčna stopnja pljučnega raka večala vse do začetka novega tisočletja, ko se je ustalila pri vrednosti okoli 90/100.000.
- Pljučnega raka strmo prehitvata rak prostate (sprememba incidenčne stopnje za povprečno -0,6 % na leto) in nemelanomski kožni rak (povečanje za povprečno 4,1 % na leto). Izjemno povečanje incidence raka prostate v zadnjih dveh desetletjih ni posledica kakšnega novega nevarnostnega dejavnika, temveč predvsem vse širše rabe testa za določanje za prostato specifičnega antigena (PSA) pri moških brez zdravstvenih težav in odkrivanja velikega števila primerov, ki bi sicer ostali vse življenje prikriti. Podatki za zadnja leta kažejo, da smo vrh incidence raka prostate že dosegli.
- Tudi časovne spremembe v pojavljanju raka debelega črevesa in danke je treba ocenjevati ob upoštevanju sprememb v diagnostiki – leta 2009 smo namreč v Sloveniji uvedli Državni program presejanja in zgodnjega odkrivanja predrakavih sprememb in raka na debelem črevesu in danki (Svit). Groba incidenčna stopnja raka debelega črevesa in danke pri moških od leta 2011 pada za 2,5 % letno, pred tem pa je v desetletnem obdobju 1999–2008 naraščala vsako leto za 3,6 %. Povprečne letne odstotne spremembe so prikazane ob krivuljah na Sliki 7a.
- Med pogostejšimi rakavimi boleznimi pri ženskah so se večale grobe incidenčne stopnje raka dojk (za 2,6 % povprečno letno), nemelanomskega kožnega raka (povečanje za povprečno 4,5 % letno), pljučnega raka (za 6,3 %) in raka materničnega telesa (za 2,1 %).
- Incidenčna stopnja raka materničnega vratu od uvedbe Državnega programa zgodnjega odkrivanja predrakavih sprememb in raka materničnega vratu (ZORA) pada (za povprečno 1,9 % na leto v zadnjih desetih letih).
- Podobno kot pri moških se tudi pri ženskah zaradi uvedbe presejalnega programa Svit leta 2009 spreminja časovni trend pojavljanja raka debelega črevesa in danke – od leta 2011 groba incidenčna stopnja pada za 1,6 % letno, pred tem pa je med 1999 in 2008 naraščala vsako leto za 3,4 %.



\* Povprečna letna sprememba je statistično značilna pri stopnji tveganja 0,05 / Average annual change is statistically significant at 0.05 significance level

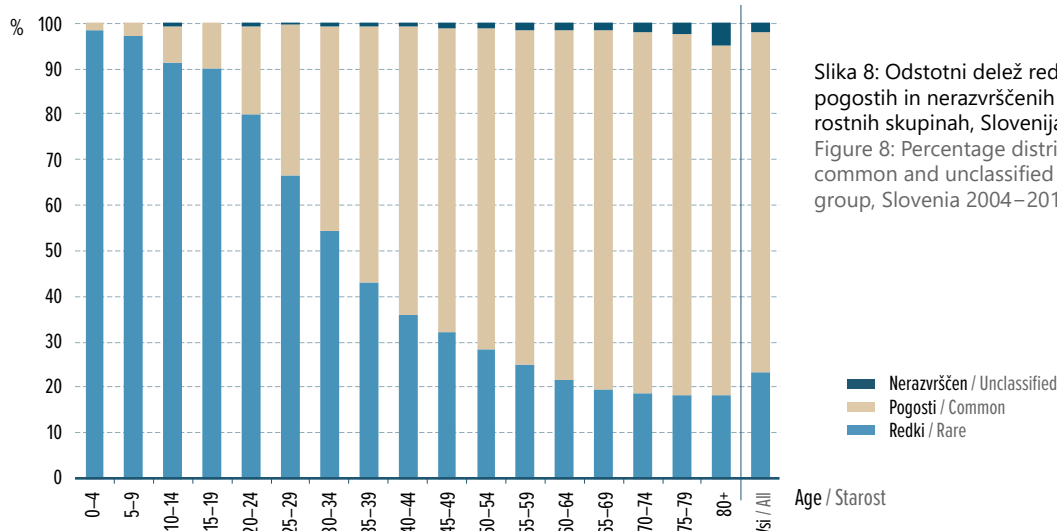
Slika 7a. Groba letna incidenčna stopnja izbranih rakov s povprečno letno spremembo v zadnjih 10 letih pri moških, Slovenija 1950–2020.  
Figure 7a. Crude annual incidence rates of selected primary cancer sites with average annual change in last 10 years in males, Slovenia 1950–2020.



Slika 7b. Groba letna incidenčna stopnja izbranih rakov s povprečno letno spremembo v zadnjih 10 letih pri ženskah, Slovenija 1950–2020. Figure 7b. Crude annual incidence rates of selected primary cancer sites with average annual change in last 10 years in females, Slovenia 1950–2020.

## Redki raki

- Poseben izziv so redke rakave bolezni (opredeljene kot tiste, ki se jih letno diagnosticira manj kot 6 novih primerov na 100.000 prebivalcev).
- Skupaj so redki raki v Sloveniji predstavljali približno petino vseh novo ugotovljenih primerov raka – letno je za njimi zbolelo približno 3.000 bolnikov.
- Za redke rake je značilno, da se v primerjavi s pogostejšimi večkrat pojavljajo pri otrocih in mladostnikih.
- Kot pri vseh redkih boleznih se tudi pri redkih rakah spopadamo s podobnimi težavami: pozno in težko jih diagnosticiramo, njihov nastanek in možnosti zdravljenja so slabo raziskani ali pa najustreznejše zdravljenje ni široko dostopno. Da bi uspešno obvladovali redke rake, je pomembno, da njihovo breme natančno spremljamo ter da vse države sprejmejo smernice in določijo referenčne centre za diagnostiko in zdravljenje teh bolnikov.



Slika 8: Odstotni delež redkih, pogostih in nerazvrščenih rakov po starostnih skupinah, Slovenija 2004–2013. Figure 8: Percentage distribution of rare, common and unclassified cancers by age group, Slovenia 2004–2013.

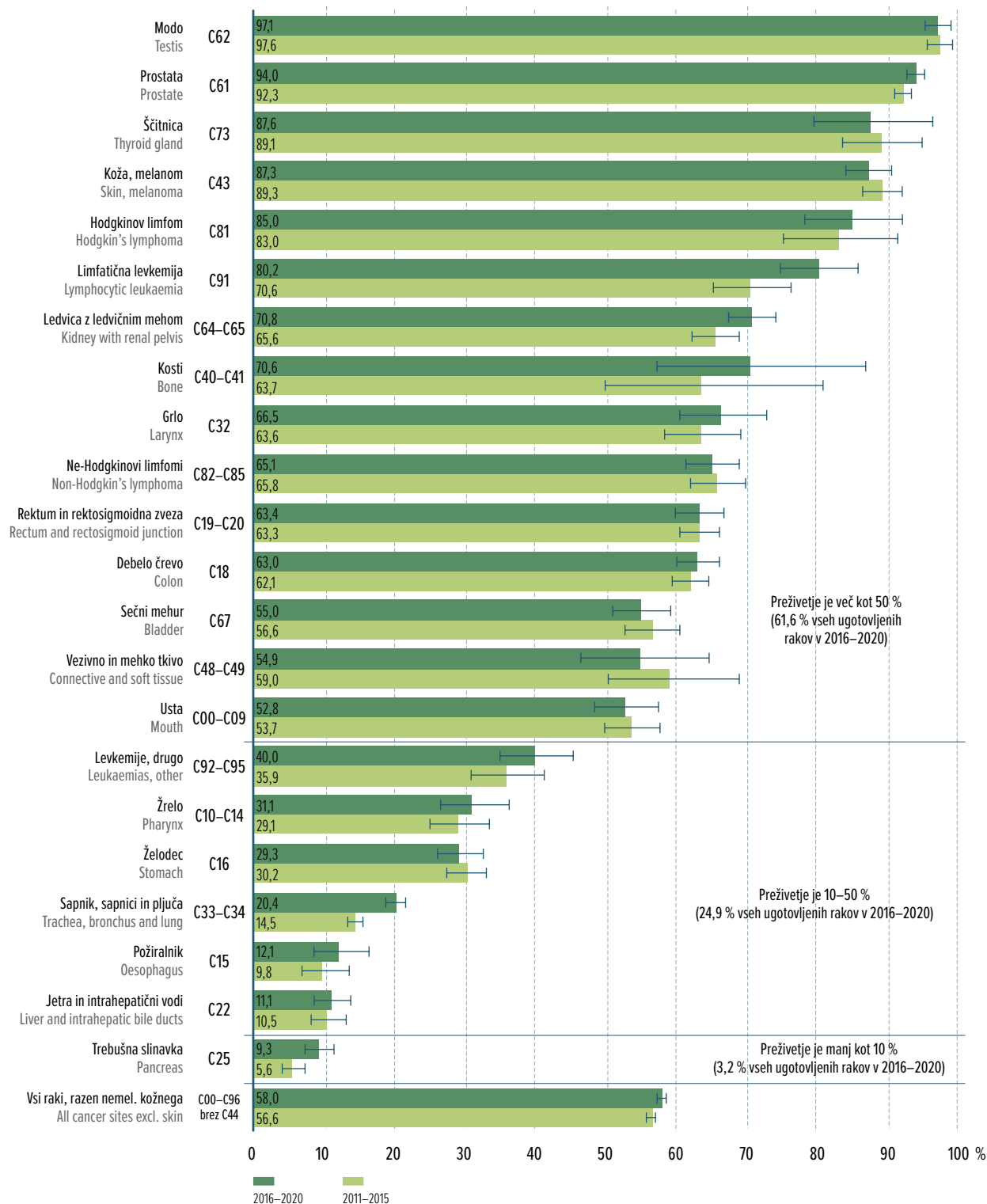


## Preživetje

- Petletno čisto preživetje moških bolnikov s katerokoli vrsto raka razen nemelanomskega kožnega, ki so zboleli v obdobju 2016–2020, je bilo že 58,0 %, pri ženskah pa 62,0 %.
- Več kot 80 % je bilo čisto petletno preživetje pri moških z rakom mod, prostate, ščitnice, kožnim melanomom in Hodgkinovim limfomom, pri ženskah pa pri bolnicah z rakom ščitnice, kožnim melanomom, rakom dojk in Hodgkinovim limfomom.
- V letu 2020 je bil narejen pregled preživetij slovenskih onkoloških bolnikov, zbolelih med letoma 1997 in 2016. Rezultati analize so na voljo v publikaciji *Preživetje bolnikov z rakom, zbolelih v letih 1997–2016 v Sloveniji* (Zadnik et al., 2020), ki je v digitalni obliki dostopna na [www.onko-i.si/rrs](http://www.onko-i.si/rrs). Glavni zaključki so:

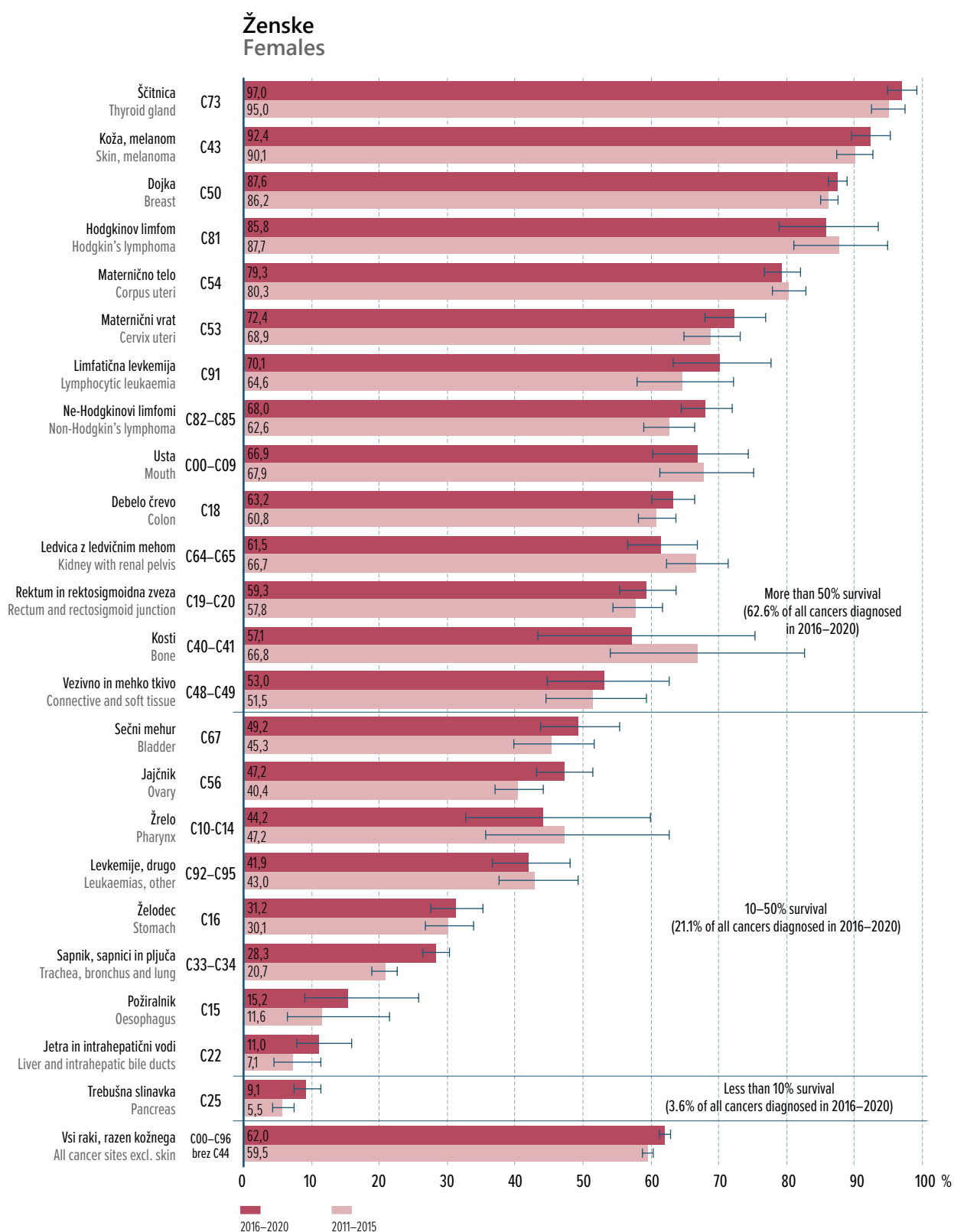
1. Preživetje slovenskih bolnikov z rakom se s časom povečuje. V zadnjih 20 letih (1997–2001 in 2012–2016) se je petletno čisto preživetje povečalo za 11 odstotnih točk. Občutno večja je rast pri moških, kjer se je petletno čisto preživetje povečalo za 17 odstotnih točk (z 38 % na 55 %). Pri ženskah je petletno čisto preživetje zraslo za 6 odstotnih točk (s 54 % na 60 %).
2. Ključni dejavniki za preživetje bolnikov z rakom so še vedno starost, stadij ob diagnozi in ustrezno zdravljenje. Petletno čisto preživetje je najmanjše pri starejših od 75 let, vendar se je tudi v skupini najstarejših bolnikov v zadnjih 20 letih petletno preživetje izboljšalo za 7 odstotnih točk. Petletno čisto preživetje bolnikov z omejenim stadijem se je v 20 letih povečalo za 10 odstotnih točk; preživetje pri bolnikih z razsejanim stadijem se ne izboljšuje.
3. Pri obeh spolih se je v zadnjih 20 letih značilno povečalo preživetje pri treh pogostih rakah: raku na debelem črevesu in danki (za 14 odstotnih točk z 48 % na 62 %), kožnem melanomu (za 12 odstotnih točk z 79 % na 91 %) ter pri pljučnem raku (za 8 odstotnih točk z 10 % na 18 %). Rezultati kažejo zgodnejšo diagnostiko in napredek pri sistemskem zdravljenju.
4. Občuten je tudi napredek pri obeh najpogostejših rakah, raku dojke pri ženskah in raku prostate pri moških: petletno čisto preživetje bolnic z rakom dojke se je v zadnjih 20 letih povečalo za 10 odstotnih točk, petletno čisto preživetje bolnikov z rakom prostate pa celo za več kot 20 odstotnih točk. Velik napredek pri raku prostate je verjetno samo navidezen, saj smo ravno v obravnavnem obdobju v Sloveniji precej nekritično uporabljali testiranje PSA, s katerim smo odkrivali rake prostate, ki bi po naravnem poteku še dolgo ostali klinično nemi, ter tako z zgodnejšo diagnozo umetno podaljšali preživetje.
5. V skupino rakov, kjer napredka s časom ni opaziti ter pri katerih preživetje še vedno ostaja slabo, pa se uvrščajo rak trebušne slinavke, rak požiralnika, raki jeter, žolčnika in žolčevodov ter možganski tumorji.
6. V raziskavi CONCORD-3 smo primerjali petletna čista preživetja odraslih bolnikov, zbolelimi med letoma 2010 in 2014 v 26 evropskih državah, s 15 različnimi vrstami raka. Preživetje slovenskih bolnikov z rakom je v večini primerov pod evropskim povprečjem, kar nam daje dobro osnovo za nadaljnje izboljšave.
7. Med bolniki z rakom je manj kot 1 % otrok in mladostnikov; zbolevalo predvsem za levkemijami, tumorji osrednjega živčevja in limfomi in imajo boljše petletno preživetje kot odrasli. V zadnjih 20 letih (1997–2001 in 2012–2016) se je petletno preživetje otrok in mladostnikov, zbolelih za rakom, povečalo za 7 odstotnih točk (z 79 % na 86 %).

## Moški Males



Slika 9a. Petletno čisto preživetje (s 95-odstotnim intervalom zaupanja) pri moških, zbolelih za izbranimi raki v letih 2016-2020 in 2011-2015.

Figure 9a. Five-year net survival (with 95% confidence interval) for males diagnosed with selected cancers in periods 2016-2020 and 2011-2015.



Slika 9b. Petletno čisto preživetje (s 95-odstotnim intervalom zaupanja) pri ženskah, zbolelih za izbranimi raki v letih 2016-2020 in 2011-2015.

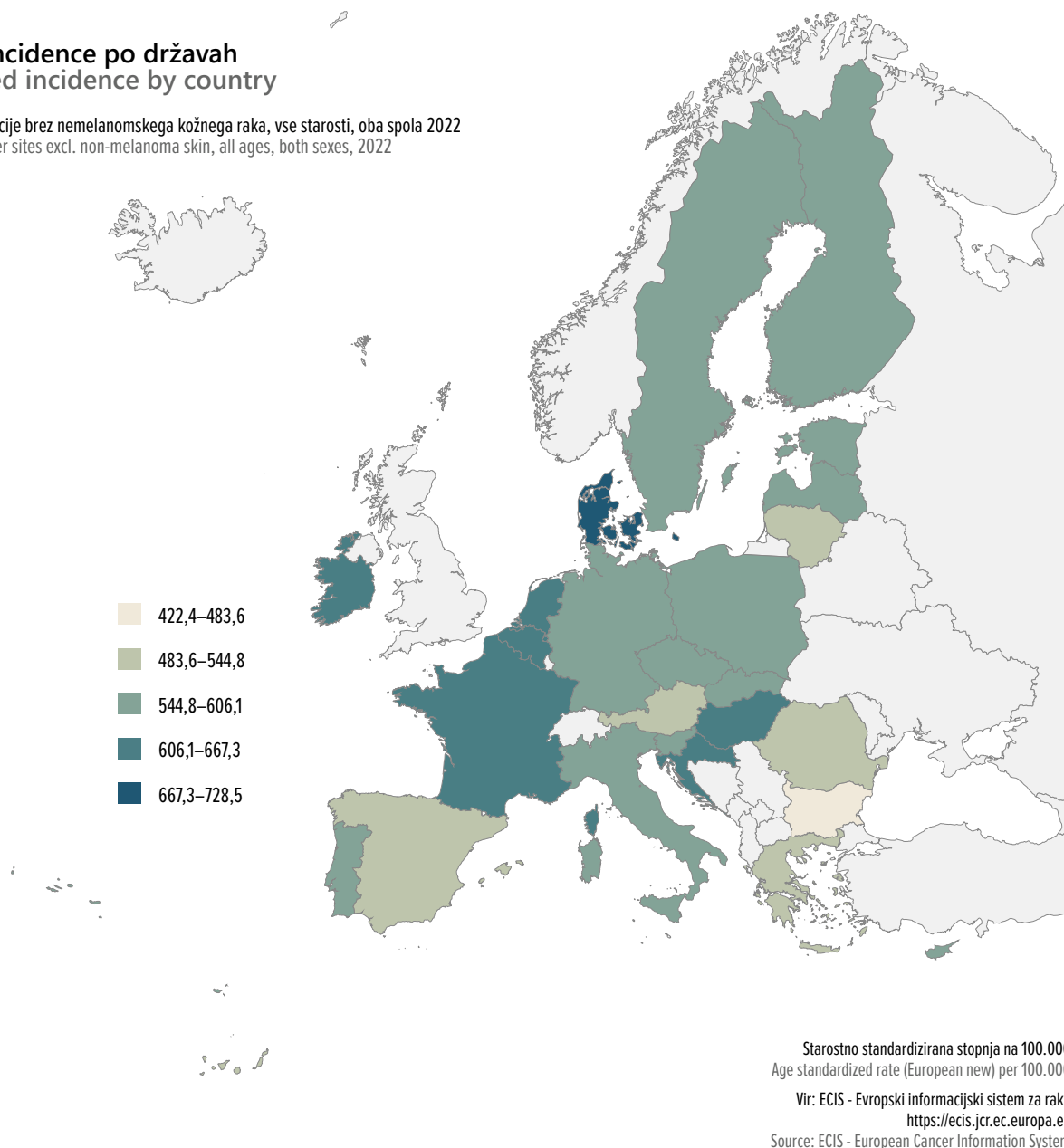
Figure 9b. Five-year net survival (with 95% confidence interval) for females diagnosed with selected cancers in periods 2016-2020 and 2011-2015.

## Primerjava z Evropo

- Po ocenah Evropskega informacijskega sistema za raka (<https://ecis.jrc.ec.europa.eu/>) je bila Slovenija leta 2022 po incidenčni stopnji (starostno standardizirani na evropsko prebivalstvo) vseh rakov razen kožnega (605/100.000) na osmem mestu med 27 evropskimi državami. Večjo incidence so imele Danska, Irska, Nizozemska, Hrvaška, Madžarska, Belgija in Francija.
- Po umrljivostni stopnji smo na petem mestu, večjo umrljivost so imele Poljska, Madžarska, Hrvaška in Slovaška.

### Ocena incidence po državah Estimated incidence by country

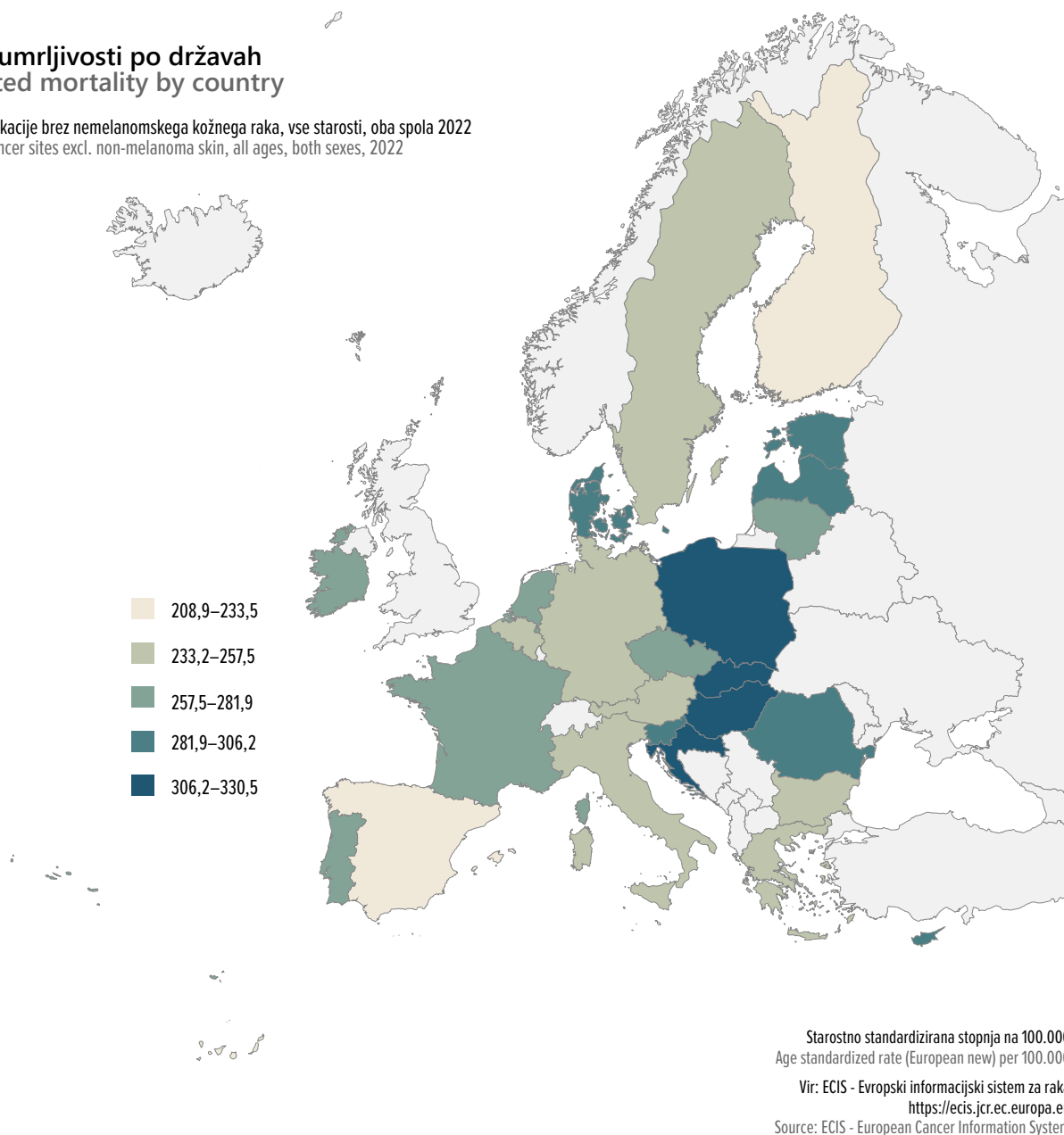
EU-27, vse lokacije brez nemelanomskega kožnega raka, vse starosti, oba spola 2022  
EU-27, all cancer sites excl. non-melanoma skin, all ages, both sexes, 2022



Slika 10a. Ocenjena starostno standardizirana (evropski standard) incidenčna stopnja raka (brez nemelanomskega kožnega) v Evropi, 2022.  
Figure 10a. Estimated age-standardized (European standard) incidence rates of cancer (excluding non-melanoma skin) in Europe, 2022.

## Ocena umrljivosti po državah Estimated mortality by country

EU-27, vse lokacije brez nemelanomskega kožnega raka, vse starosti, oba spola 2022  
EU-27, all cancer sites excl. non-melanoma skin, all ages, both sexes, 2022



Slika 10b. Ocenjena starostno standardizirana (evropski standard) umrljivostna stopnja raka (brez nemelanomskega kožnega) v Evropi, 2022.  
Figure 10b. Estimated age standardized (European standard) mortality rates of cancer (excluding non-melanoma skin) in Europe, 2022.

# Cancer in Slovenia

For additional information on the burden of cancer in Slovenia and in the world, visit: [www.slora.si/en](http://www.slora.si/en). Figures are available on pages 15–27.

## Summary

- Among those born in 2020, one in two men and one in three women are expected to develop cancer by the age of 75.
- Every year around 16,000 Slovenians (more than 8,000 men and more than 7,000 women) are diagnosed with cancer and over 6,000 (about 3,500 men and just under 3,000 women) die of cancer. Currently, there are already over 120,000 people living in Slovenia who have at some point during their lifetime been diagnosed with cancer (prevalence).
- In 2020, the first year of the Covid 19 epidemic, 11% fewer cancers were diagnosed than expected. The greatest shortage of diagnoses occurred in non-melanoma skin cancer, prostate, breast and lung cancers, as well as the hematological cancers.
- The risk of developing cancer increases gradually with age and is highest among the elderly population; of all cancer patients diagnosed in 2020, 65% were over 65 years old. As the Slovenian population is ageing, the number of new cancer cases is expected to increase simply on account of the growing proportion of elderly people.
- In 2020, the most frequent cancers in Slovenia (skin, lung, breast, prostate, and colorectal) accounted for 58% of all diagnosed cancers. These cancers are associated with unhealthy lifestyle: smoking, excessive alcohol consumption, unhealthy diet, lack of physical activity and consequential overweight and obesity, and excessive sun exposure – primary prevention measures should be in place with the aim to reduce their burden.
- Cancer screening programmes recommended by the Council of the European Union (EC) that have been introduced in Slovenia have already lowered mortality from breast, colorectal and cervical cancer through early detection; cancer incidence for colorectal and cervical cancers has also been reduced.
- The five-year net survival of adult Slovenian patients with any type of cancer (excluding non-melanoma skin cancer) who were diagnosed in the 2016–2020 period was 58% in men and 62% in women.

## Basic figures on cancer in Slovenia 2020

- In 2020, 15,096 people (8,062 men and 7,034 women) were diagnosed with cancer in Slovenia.
- The age-standardized incidence rate (European standard population) was 465.5/100,000; 531.9 in men and 420.3 in women. Among those born in 2020, one in two men and one in three women are expected to develop cancer by the age of 75.
- In 2020, 6,423 Slovenians died of cancer, 3,602 men and 2,821 women. There were 124,830 people alive in Slovenia (57,593 men and 67,237 women) who had at some point during their lifetime been diagnosed with cancer (prevalence).
- There are no significant differences in the burden of cancer between regions of Slovenia.

## Age of patients

- Although the risk of cancer increases gradually with age, it is by far highest in older age; of all cancer patients in 2020, as many as 67% men and 62% women were diagnosed with cancer after the age of 65. Less than half a percent of all cancers were diagnosed in children and adolescents (up to 20 years of age).

- As the Slovenian population is ageing, the number of new cancer cases is expected to increase simply on account of the growing proportion of elderly people. We estimate that in 2023, there will have been as many as 17,046 newly diagnosed cancer patients.

## Time trends

- In general, the crude incidence and mortality rates of cancer are increasing. However, in 2020, the first year of the Covid 19 epidemic, we recorded an 11% decrease in the number of new cancer cases.
- The crude incidence rate has almost doubled in the last twenty years, increasing by an average of 1.6% per year over the last decade (by 1.0% in men and 2.4% in women). The crude mortality rate has increased on average by 0.8% per year in men over the last 10 years and by 1.2% in women.
- More than half of this increase can be attributed to an ageing population, as longer life expectancy means more people are likely to be diagnosed with cancer. The age-standardized, cumulative incidence rate shows that the risk of cancer adjusted for ageing has been increasing more slowly, with the trend reversed for men. It is also encouraging that cancer mortality (if we adjust for ageing) has been declining, especially since the mid-1990s, pointing to greater successes of cancer treatment.

## Most frequent cancers

- Cancer is not a single disease, but rather several hundred different diseases. These can occur in all tissues and organs of the human body. They vary in frequency, treatment and outcome, and are also associated with different, more or less established risk factors.
- The five most frequent cancers in Slovenia – skin (excluding melanoma), lung, breast, prostate and colorectal – account for 58% of all new cancer cases.
- The most frequent cancers are associated with an unhealthy lifestyle, excessive sun exposure, unhealthy diet, smoking and excessive alcohol consumption. Primary prevention measures should be in place with the aim to reduce their burden.
- In men, prostate cancer and non-melanoma skin cancer account for around one-fifth of all cancers each, followed by lung and colorectal cancer. In women, non-melanoma skin cancer is the most frequent cancer, followed by breast cancer, which accounts for one-fifth of all cancer cases. The next most frequent cancers in women are colorectal and lung cancer.
- The most frequent cancers differ according to age. In children and adolescents aged under 20 years leukaemias are the most frequent, followed by tumours of the central and autonomic nervous system and lymphomas. Young adult men are most often diagnosed with testicular cancer and skin cancer, while in young women breast cancer is ranked first.

## Time trends for most frequent cancers

- In 2020, the first year of the Covid 19 epidemic, the greatest shortage of diagnoses occurred in non-melanoma skin cancer, prostate, breast and lung cancers, as well as the haematological cancers.
- Among the more frequent cancers in men, the incidence rate of lung cancer was increasing until the early 2000s, when it stabilized at around 90/100,000.
- Lung cancer is outranked by the steep rising rates of prostate cancer (crude incidence rate changes at the rate of -0.6% per year on average) and non-melanoma skin cancer (an increase of 4.1% per year on average). The dramatic increase in the incidence of prostate cancer over the

past two decades is not due to any newly identified risk factor, but rather to the increasing use of the prostate-specific antigen (PSA) test in healthy men and therefore detection of a large number of cancers that would have otherwise remained undetected for life. Data for recent years indicate that we have already reached the peak incidence of prostate cancer.

- Time trends in the incidence of colorectal cancer must also be interpreted by taking into account changes in diagnostics – in 2009 Slovenia introduced the national screening and early detection programme for colorectal cancer (Svit). The crude incidence rate of colorectal cancer in men decreased by 2.5% per year from 2011 on, but it was on the rise in 1999–2008 (3.6% on average annually). Average annual percentage changes are shown next to the incidence curves in Figure 7.
- Among the more frequent cancers in women, crude incidence rates have been increasing for breast cancer (by 2.6% on average per year), skin, excluding melanoma (by 4.5% on average per year), lung cancer (by 6.3% on average per year) and corpus uteri cancer (by 2.1% on average per year).
- The incidence rate of cervical cancer has decreased significantly since the introduction of the national cervical cancer screening programme (ZORA) (by an average of 1.9% per year in the last ten years).
- Similar to men, the introduction of the Svit screening programme in 2009 has had an impact on the time trend of colorectal cancer in women – the crude incidence rate of colorectal cancer in women decreased by 1.6% per year from 2011 on, but it was on the rise in the 1999–2008 period (3.4% on average annually).

## Rare cancers

- A particular challenge is posed by rare cancers (defined as those with less than six new cases per 100,000 per year).
- In total, rare cancers in Slovenia accounted for about a fifth of all newly diagnosed cancers – around 3,000 patients were diagnosed with rare cancers every year.
- As opposed to frequent cancers, rare cancers are more likely to occur in children and adolescents.
- Problems with rare cancers are similar to those characteristic of all rare diseases: they are difficult to diagnose and are often detected late, their aetiology and treatment options are poorly researched, or else the most appropriate treatment is hard to access. In order to successfully manage rare cancers, it is important that their burden is closely monitored, and that all countries adopt guidelines as well as establish reference centres for diagnostics and treatment of such patients.

## Survival

- The five-year net survival of male patients with any type of cancer excluding non-melanoma skin cancer diagnosed between 2015 and 2020 was 58.0%, while in women it was 62.0%.
- The five-year net survival was over 80% in men with testicular cancer, prostate cancer, thyroid cancer, skin melanoma and Hodgkin's lymphoma, and in women with thyroid cancer, skin melanoma, breast cancer and Hodgkin's lymphoma.
- In 2020, a survival analysis of Slovenian cancer patients diagnosed between 1997 and 2016 was performed. The results of the analysis are published in the publication *Survival of Cancer Patients, Diagnosed in 1997–2016 in Slovenia* (Zadnik et al., 2021) which is also available in digital format at [www.onko-i.si/eng/crs](http://www.onko-i.si/eng/crs). The main conclusions are on the next page.



1. Survival of Slovenian cancer patients is improving over time. During the 20 years observed (1997–2001 and 2012–2016), five-year net survival increased by 11 percentage points. The increase was significantly higher in men, for whom five-year net survival increased by 17 percentage points (from 38% to 55%). In women, five-year net survival increased by 6 percentage points (from 54% to 60%).
2. Age and stage at diagnosis are still key factors when it comes to survival of cancer patients. Five-year net survival is lowest in those aged 75–94, though even in this age group it has improved by 7 percentage points over the past 20 years. Five-year net survival of patients with localized disease increased by 10 percentage points over the observed 20 years and has reached 85% during the last period; survival of patients with distant disease has not improved.
3. For both sexes combined, survival has improved significantly over the last 20 years for the three most frequent cancers: colorectal cancer (by 14 percentage points, from 48% to 62%), skin melanoma (by 12 percentage points, from 79% to 91%), and lung cancer (by 8 percentage points, from 10% to 18%). This improvement is due to earlier diagnosis and advances in systemic treatment.
4. Progress has also been shown in the two most frequent cancers by sex: breast cancer in women and prostate cancer in men. The five-year net survival of breast cancer patients has increased for 10 percentage points in the last 20 years, while the five-year net survival of prostate cancer patients has increased for over 20 percentage points. The improvement in prostate cancer survival is probably not real, since in the period under review, PSA testing in Slovenia was performed rather uncritically and likely resulted in detection of prostate cancers that would have otherwise remained clinically silent for a long time, thus artificially prolonging survival on account of earlier diagnosis in the natural course of disease.
5. The group of cancers where no progress has been observed over time and where survival still remains low includes pancreatic cancer, oesophageal cancer, liver, gallbladder and bile duct cancers as well as brain tumours.
6. In the CONCORD-3 study, five-year net survival of adult patients with 15 different cancers diagnosed between 2010 and 2014 was compared among 26 European countries. In most cases survival rates of Slovenian cancer patients are below the European average, which highlights the need and serves as an incentive for future improvements.
7. Less than 1% of cancer patients are children and adolescents; they are mainly diagnosed with leukaemias, central nervous system tumours and lymphomas, and have a better five-year survival compared to adults. In the last 20 years (1997–2001 and 2012–2016), the five-year survival of children and adolescents with cancer has increased by 7 percentage points (from 79% to 86%).

## Comparisons with Europe

- In 2022, according to the estimates of the European Cancer Information System (<https://ecis.jrc.ec.europa.eu/>) Slovenia ranked eighth among 27 European countries with respect to the incidence rate (age standardized, European population standard) of all cancers excluding skin cancer (605/100,000). Denmark, Ireland, the Netherlands, Croatia, Hungary, Belgium and France had a higher incidence.
- We are in fifth place in terms of mortality, led by Poland, Hungary, Croatia and Slovakia.