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Epidemiological analyses to inform an early stage of Colorectal Carcinom Clinical Practice Guideline development in the Czech Republic

Czech National Centre for Evidence-Based Healthcare and Knowledge Translation (Czech Republic)

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Background

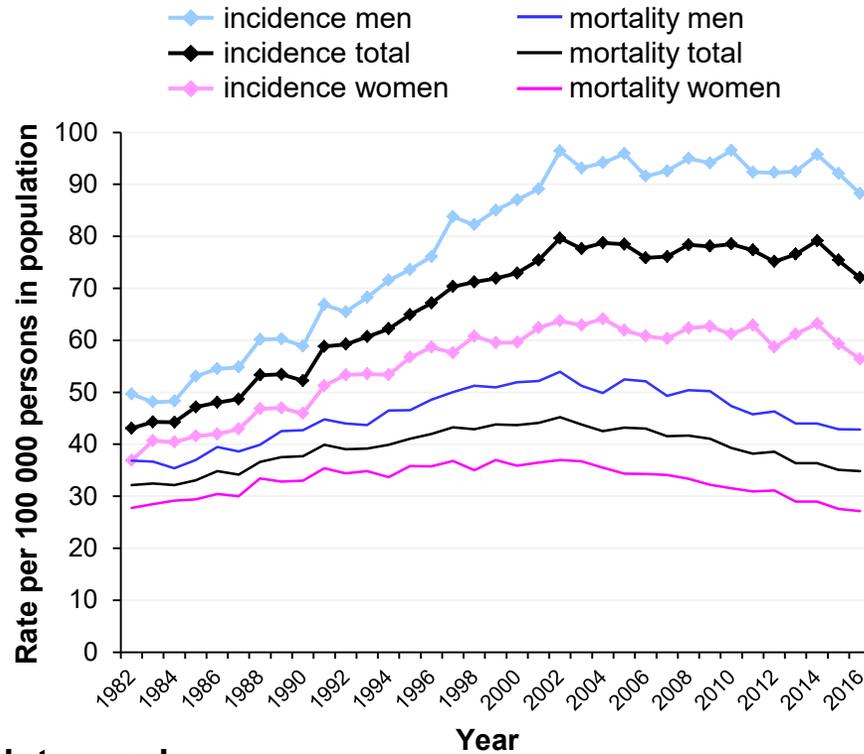
- Czech Republic: population 10.6 million
- Colorectal cancer: 2nd most frequent cancer (3rd in men, 3rd in women)
- Colorectal Cancer Screening Programme in the Czech Republic since 2009

Data sources:

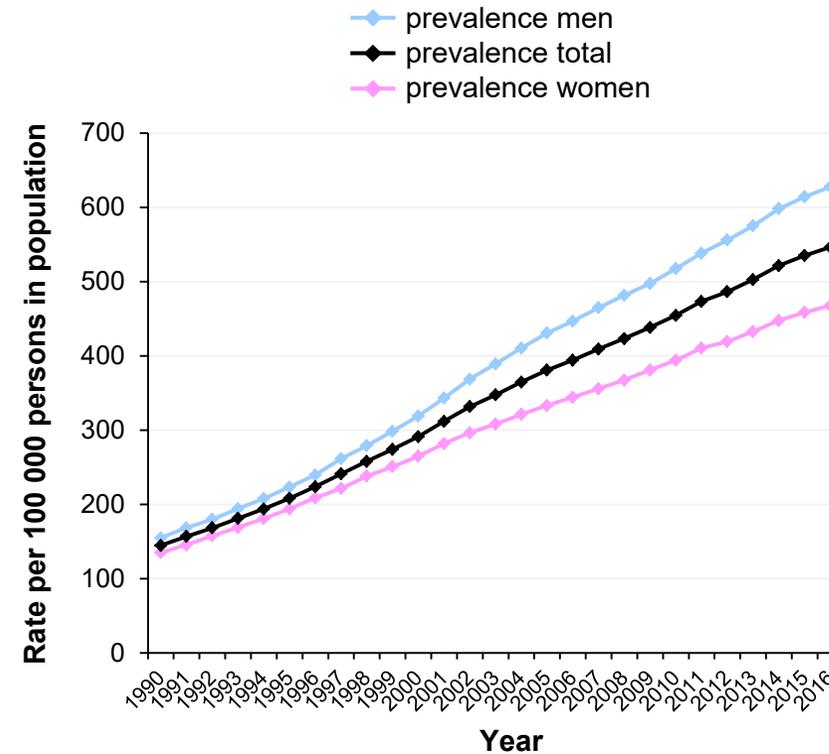
- Czech National Cancer Registry
 - individual records of neoplasms since 1977
 - demography, detailed diagnosis, stage, primary treatment, survival
- other data from National Health Information System
 - Registry of Death Certificates, National Registry of Hospitalized Patients, National Registry of Reimbursed Health Care...

Trends of epidemiology of colorectal cancer (C18–C20)

Incidence and mortality



Prevalence



Absolute numbers

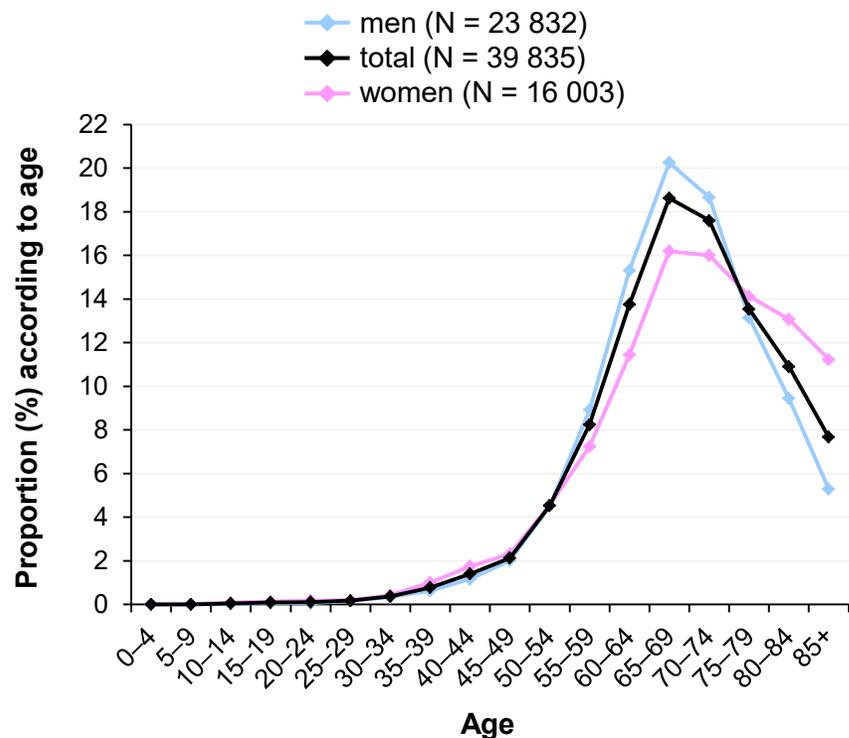
Year	2012	2013	2014	2015	2016
Incidence	7,898	8,046	8,331	7,950	7,610
Mortality	4,053	3,822	3,826	3,702	3,681
Prevalence (end of year)	51,106	52,835	54,902	56,402	57,730

Trends since 2002:
 stabilized incidence - average percentage change -0.04%
 decreasing mortality - average percentage change -1.65%
 increasing prevalence - average percentage change +3.24%

Source: Czech National Cancer Registry, IHIS CR

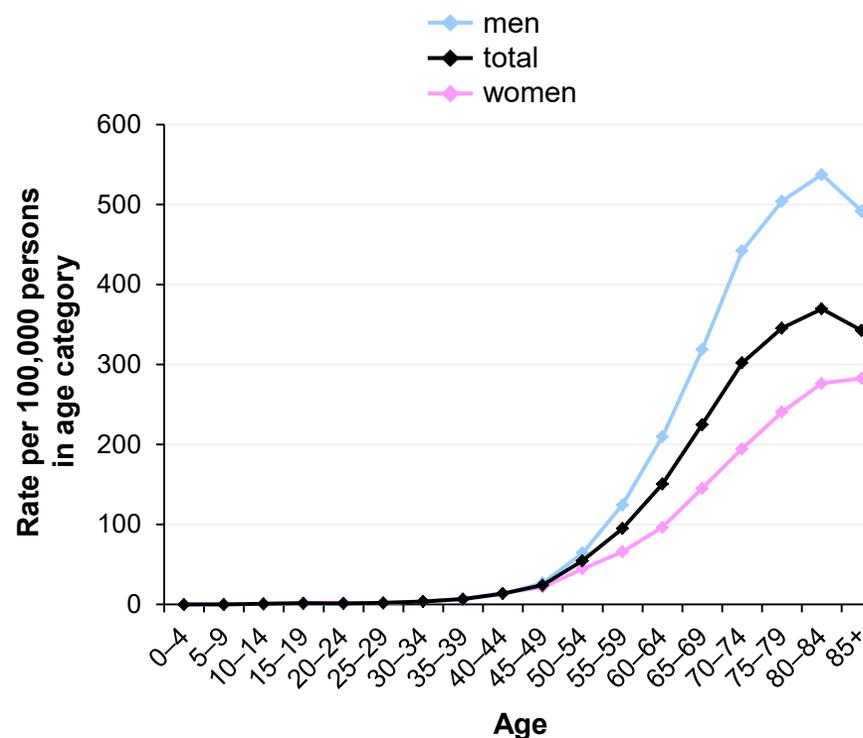
Age of newly diagnosed cases of colorectal cancer, years 2012–2016

Age structure



Median age and 25-75 percentiles:
 men: 69 (62–75) years
 women: 71 (63–79) years

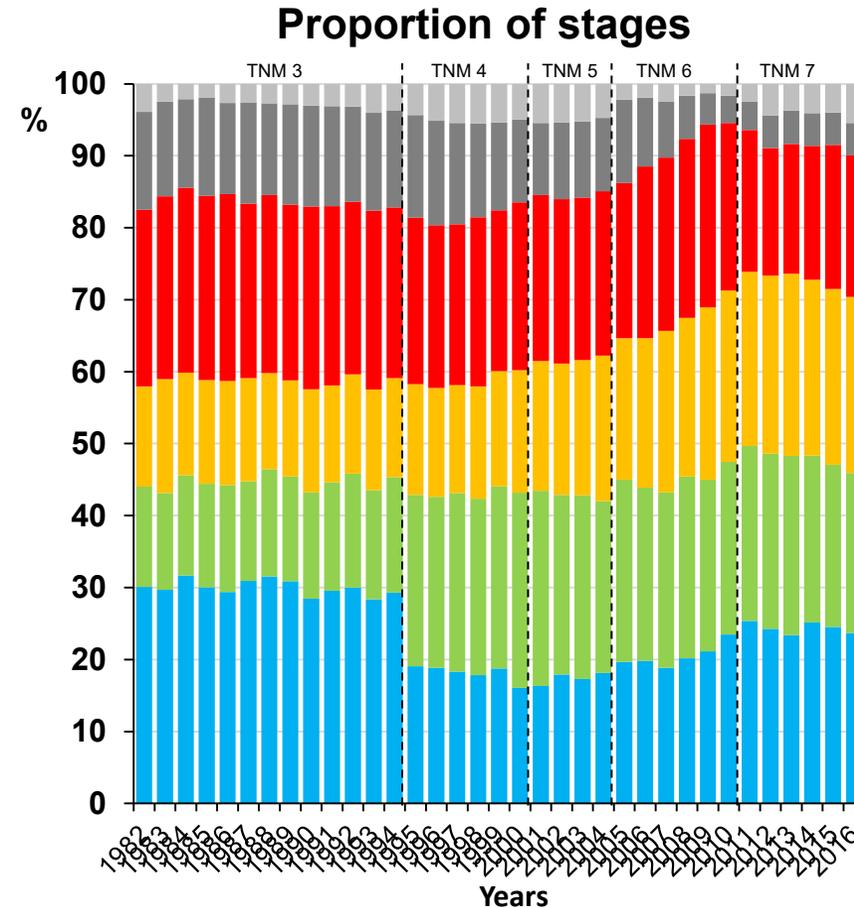
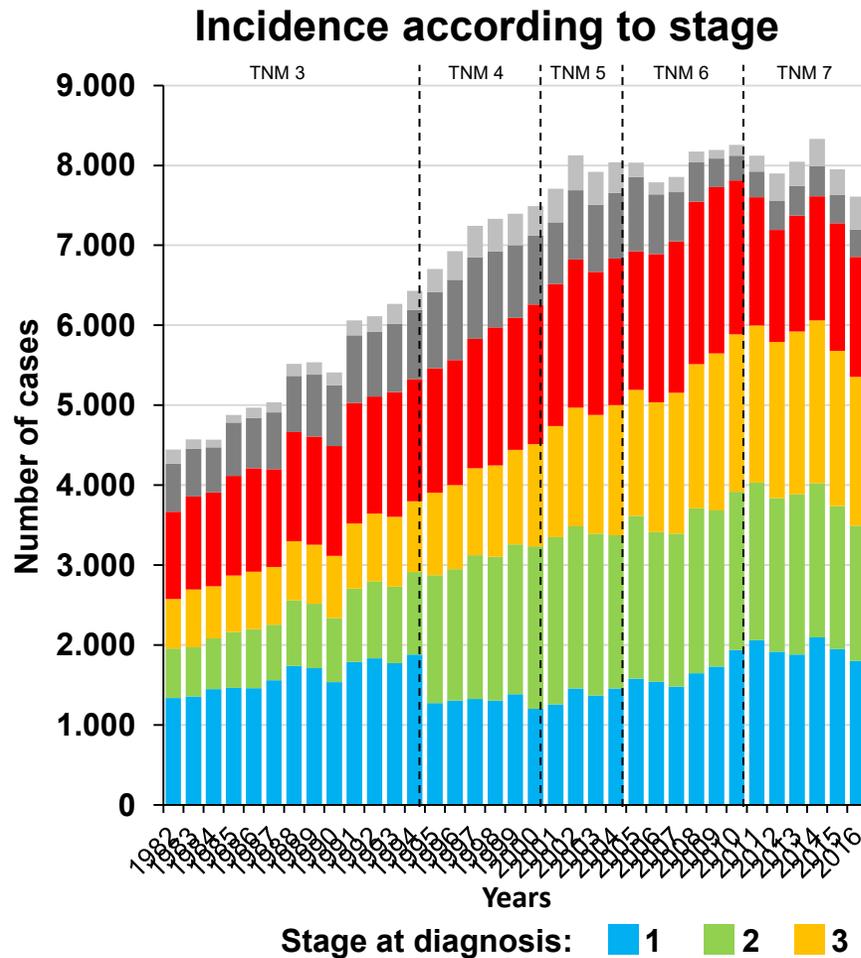
Age specific incidence



up to 60 years:
 17.9% in men and in women
75+ years:
 32.1% (27.9% in men, 38.4% in women)

Source: Czech National Cancer Registry, IHIS CR

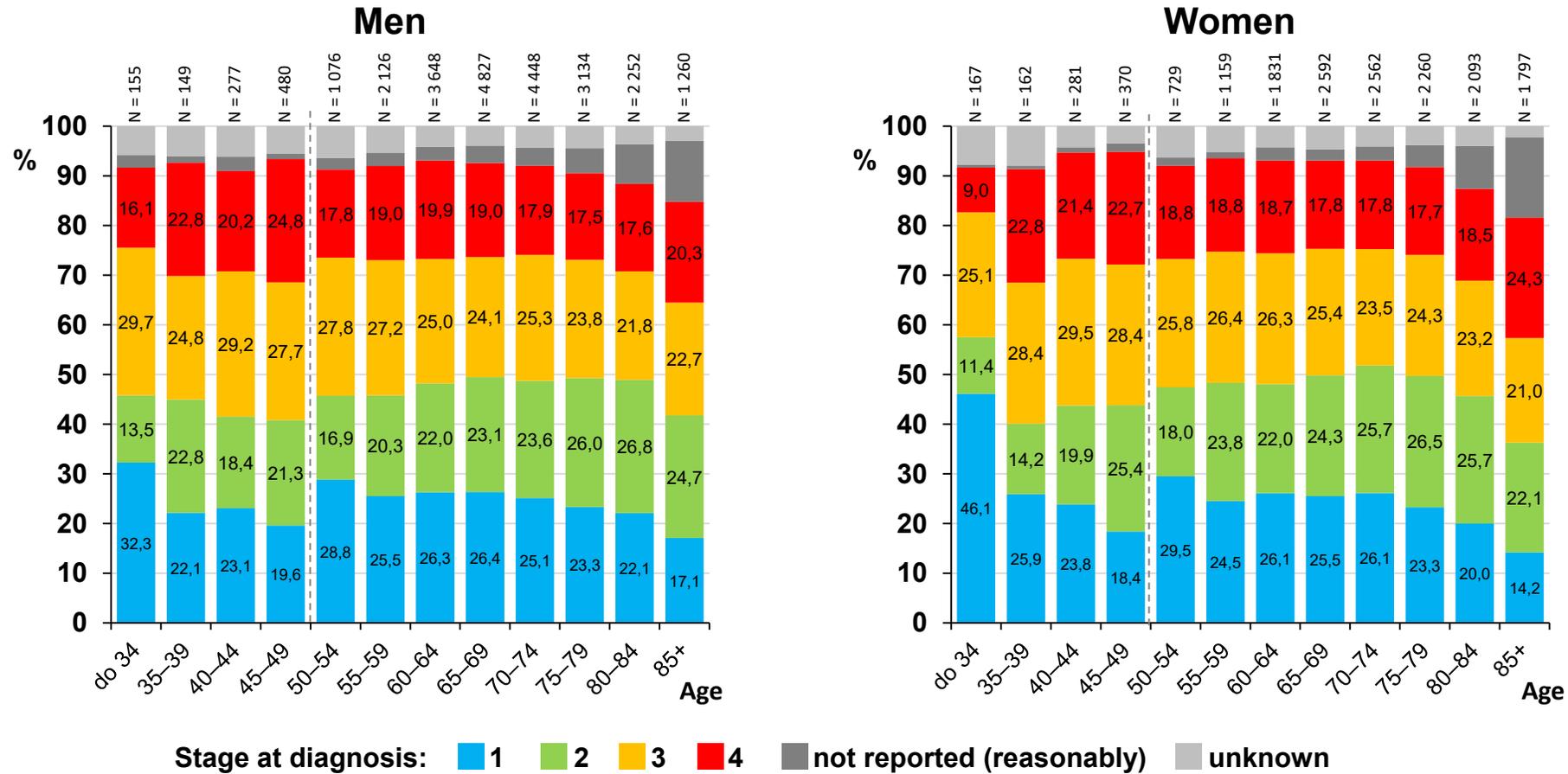
Trends of incidence of colorectal cancer according to stage



No significant changes in trends of incidence according to stage of the disease.
 Years 2012–2016: 24.2% in stage 1, 23.4% in stage 2, 24.7% in stage 3 and 18.8% in stage 4 (8.9% stage unknown or not reported).

Source: Czech National Cancer Registry, IHIS CR

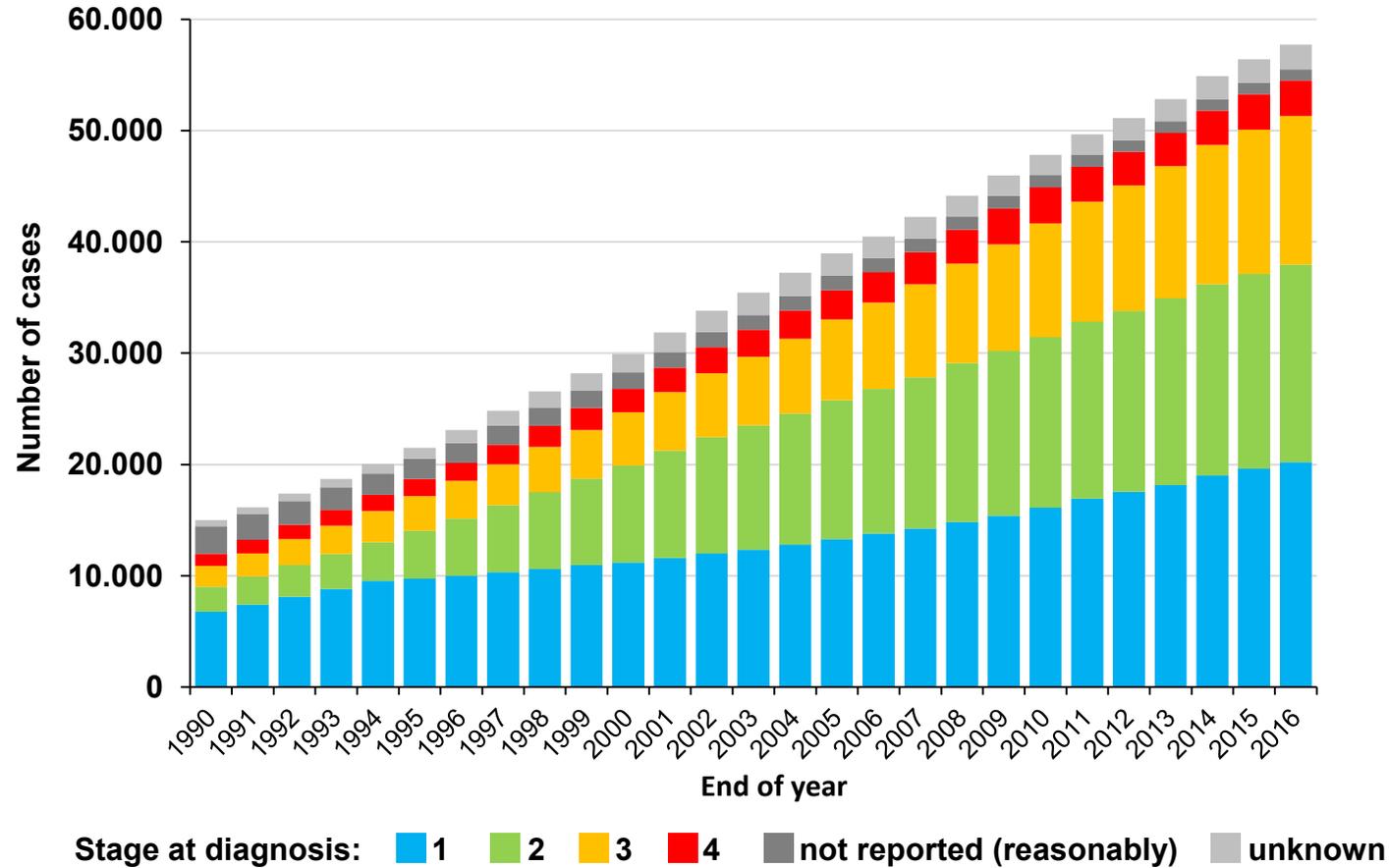
Stage of colorectal cancer cases according to age (2012-2016)



Colorectal cancer screening programme is organized for people 50+. Change of proportions of stages at this age is obvious.

Source: Czech National Cancer Registry, IHIS CR

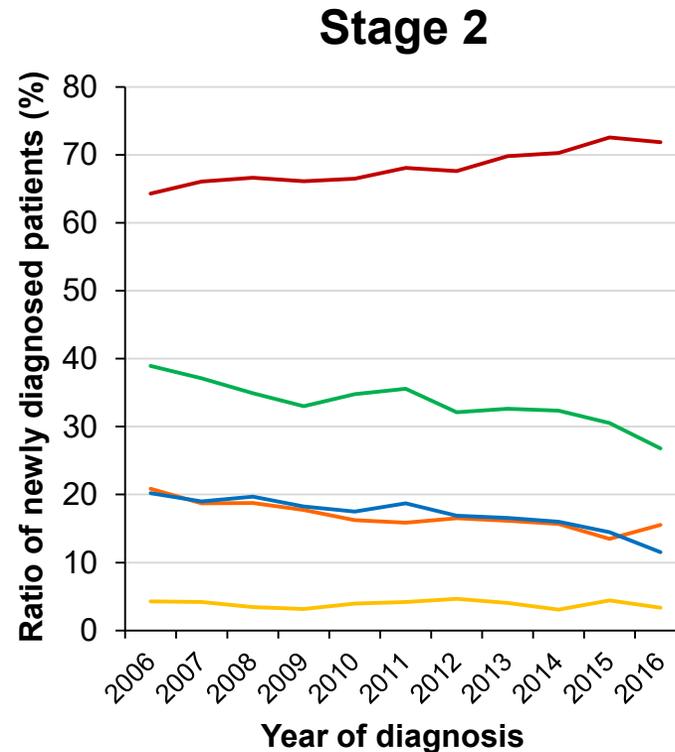
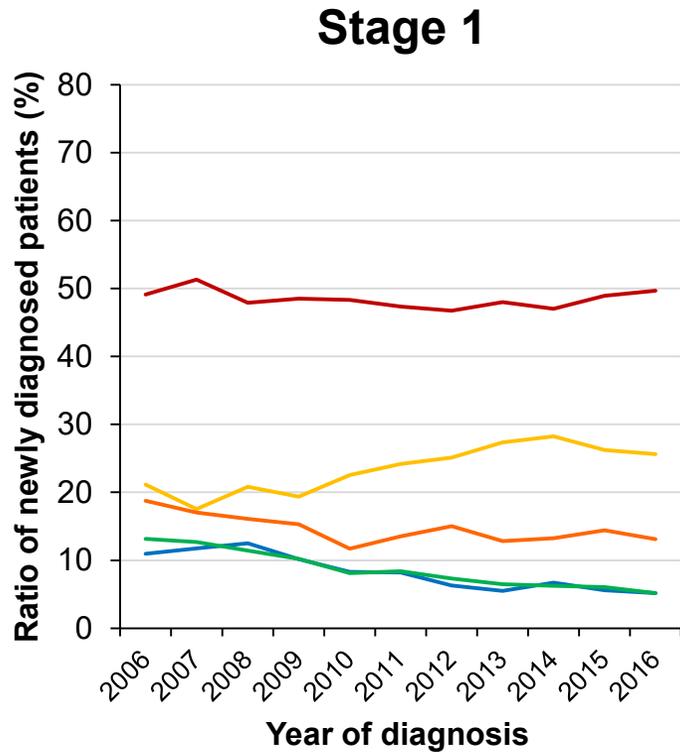
Trend of prevalence of colorectal cancer according to stage



57,730 alive patients at the end of year 2016:
 38.0% in stage 1, 30.7% in stage 2, 23.2% in stage 3 and 5.5% in stage 4 (5.6% stage unknown or not reported).

Source: Czech National Cancer Registry, IHIS CR

Primary treatment in patients with early colorectal cancer

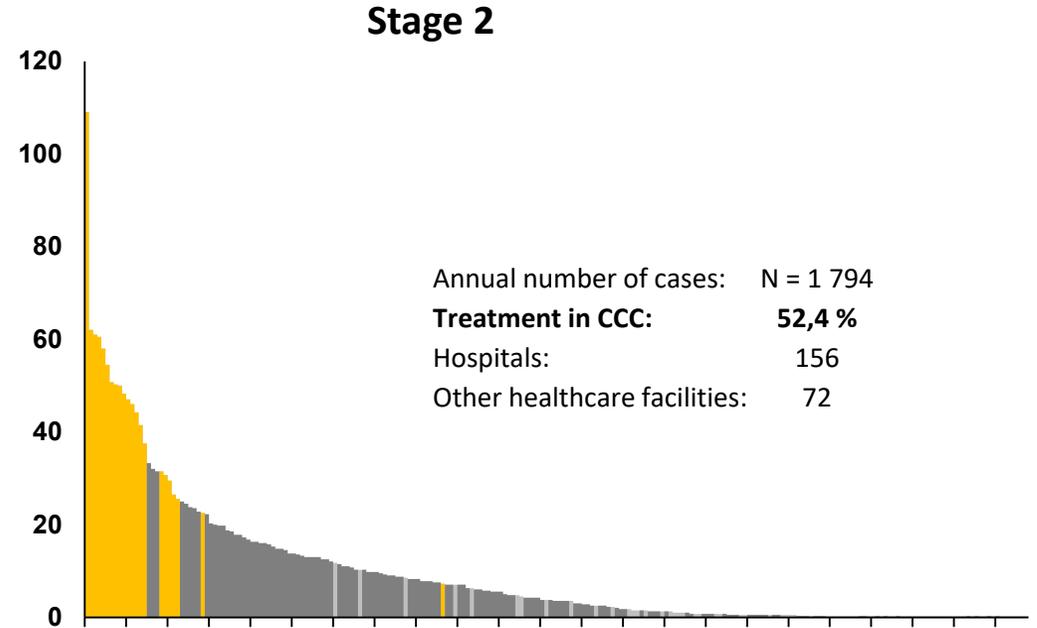
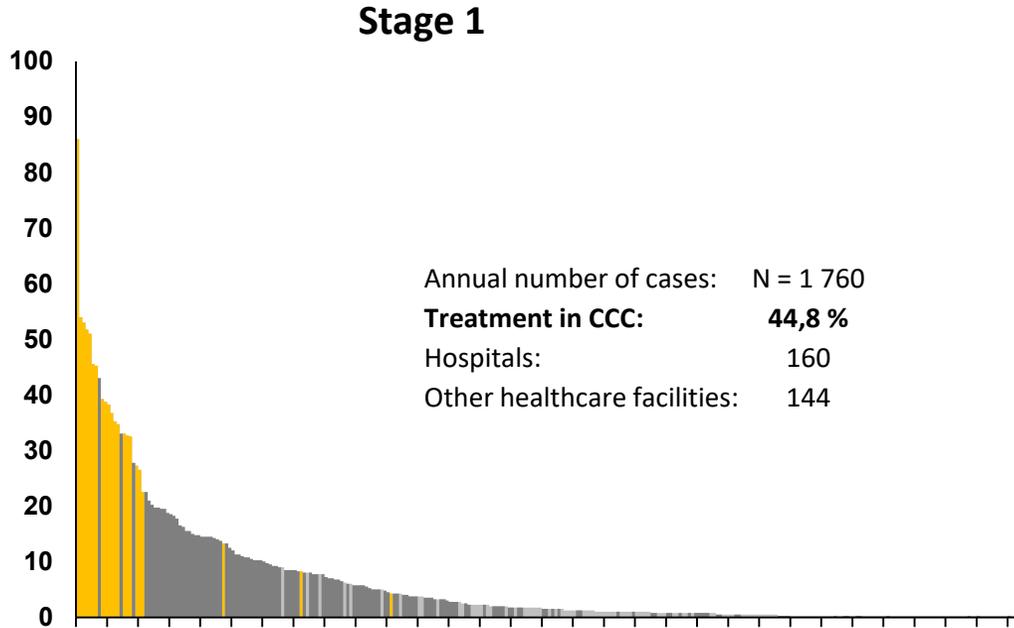


- Cancer surgery:**
- cancer resection
 - removing an entire organ along with the cancer
 - radical surgery with regional lymphadenectomy
- Other cancer treatment:**
- radiation therapy
 - chemotherapy

Source: Czech National Cancer Registry, IHIS CR

Usage of other data from National Health Information System will be discussed.
 (National Registry of Hospitalized Patients, National Registry of Reimbursed Health Care...)

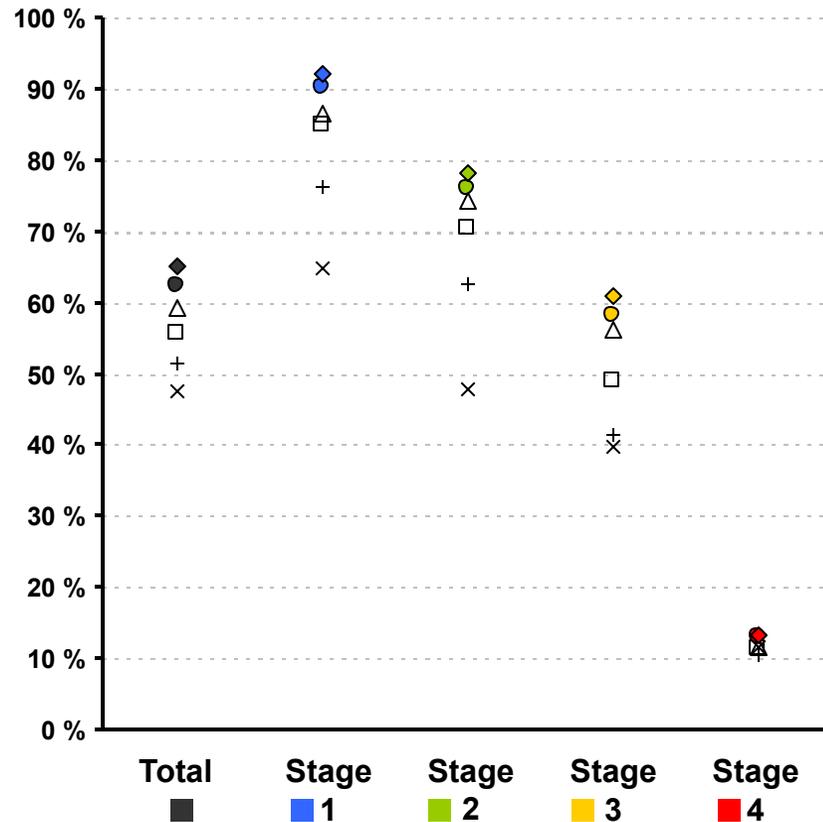
Healthcare facilities responsible for treatment



 Comprehensive Cancer Centres
 Other hospital
 Other healthcare facility

Source: Czech National Cancer Registry, IHIS CR

5-year relative survival of patients with colorectal cancer after treatment



- ◇ Period analysis 2013–2016
- Cohort analysis 2009–2012
- △ Cohort analysis 2005–2008
- Cohort analysis 2000–2004
- + Cohort analysis 1995–1999
- × Cohort analysis 1990–1994

	Cohort analysis 1990–1994	Cohort analysis 1995–1999	Cohort analysis 2000–2004	Cohort analysis 2005–2008	Cohort analysis 2009–2012	Period analysis 2013–2016
Stage 1	64,8 %	76,2 %	84,9 %	86,6 %	90,2 %	92,2 %
Stage 2	48,0 %	62,7 %	70,4 %	74,5 %	76,1 %	78,3 %
Stage 3	39,7 %	41,5 %	48,9 %	56,3 %	58,2 %	61,1 %
Stage 4	11,8 %	10,5 %	11,4 %	11,6 %	13,1 %	13,5 %
Total	47,6 %	51,5 %	55,8 %	59,2 %	62,5 %	65,2 %

Source: Czech National Cancer Registry, IHIS CR

Conclusion

- The incidence of CRC most significantly increased from 1982 to 2002 and is higher in men compared to women.
- Majority of the patients with CRC were diagnosed in early stages and women are diagnosed in slightly higher age than men.
- Since 2006 until 2016, there was reported increase in performing of surgical therapy in primary treatment of early CRC.
- Generally, relative survival in time increased in treated patients with CRC.
- In the Czech Republic, there is currently according to this analysis, almost completed the first evidence-based Clinical Practice guideline focused on diagnostic and therapy of early CRC based on GRADE methodology.