

Maternal age distribution in Down syndrome cases in the Czech Republic

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Czech Republic - Infobox

Population: 10 553 843
Area: 78,866 km²



13 regions and the capital Prague; 76 districts in total

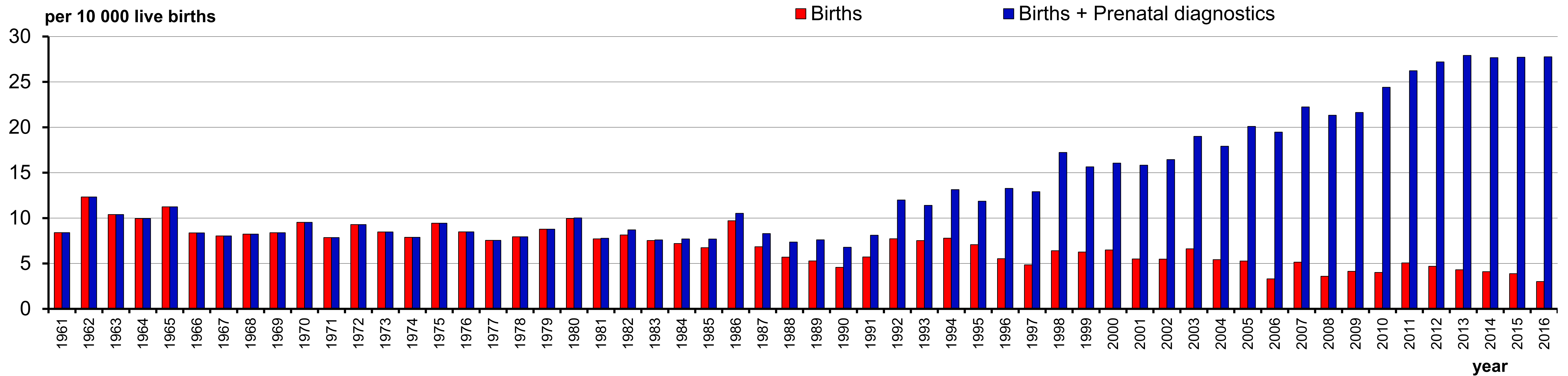
Surveillance - Infobox

- 50+ years of history – the registry was officially founded in 1964, data available from 1961.
- Population-wide coverage; reporting is compulsory.
- Data are stored in the State Institute of Health Information and Statistics (ÚZIS ČR)
- Multiple sources (geneticists, neonatologists, pediatricians, other specialists).
- Registry includes cases diagnosed in livebirths, stillbirths and prenatally diagnosed cases.
- Termination of pregnancy – legal (up to 24th GW)
- Main Classification system: ICD-10 (national)

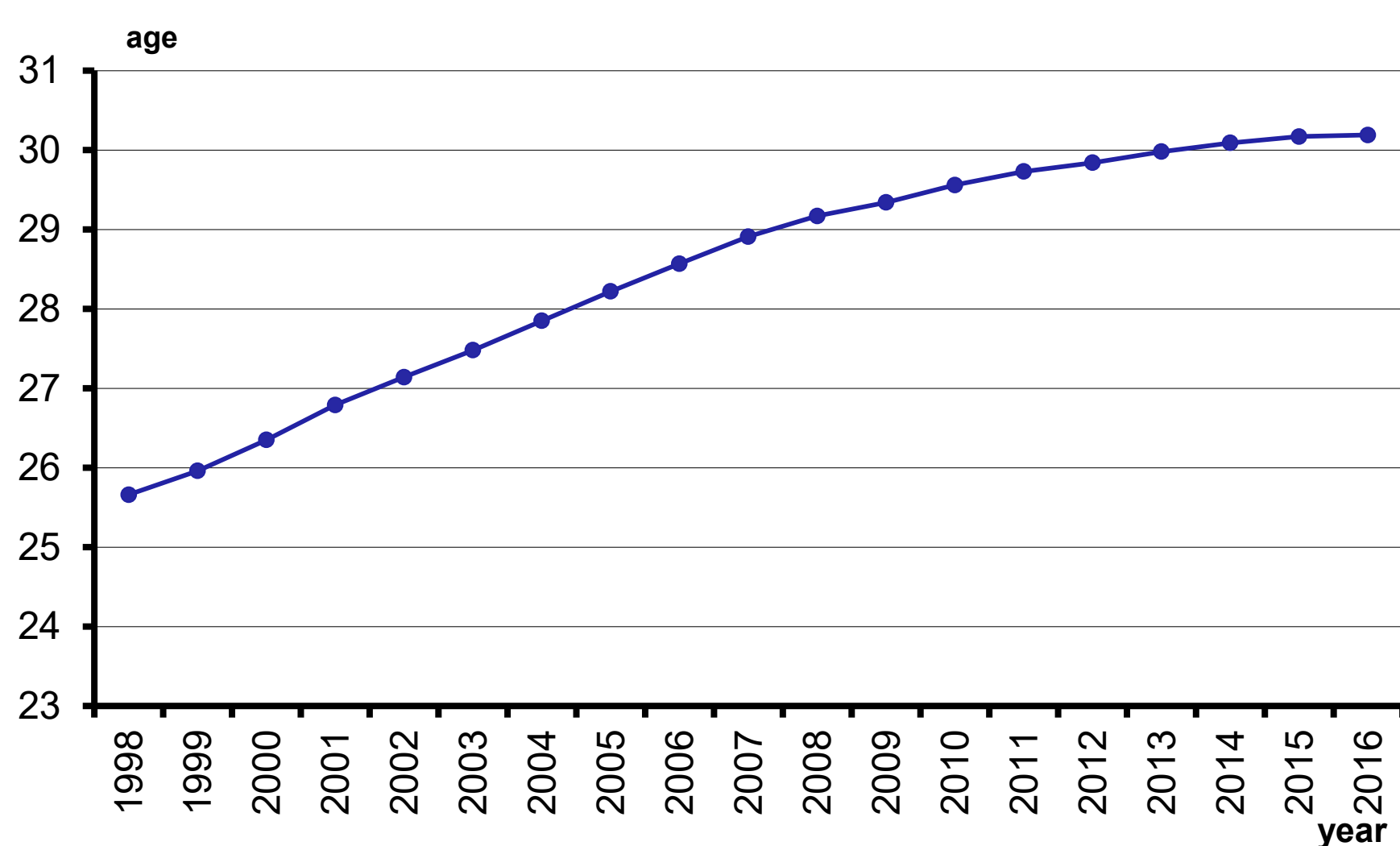
Down syndrome

- Malformation syndrome, including typical craniofacial dysmorphism, malformations of heart and other organs and psychomotor retardation
- Etiology: Trisomy 21
- ICD-10: Q90
- ICD-9: 7580
- OMIM: 190685
- ORPHANET: 870

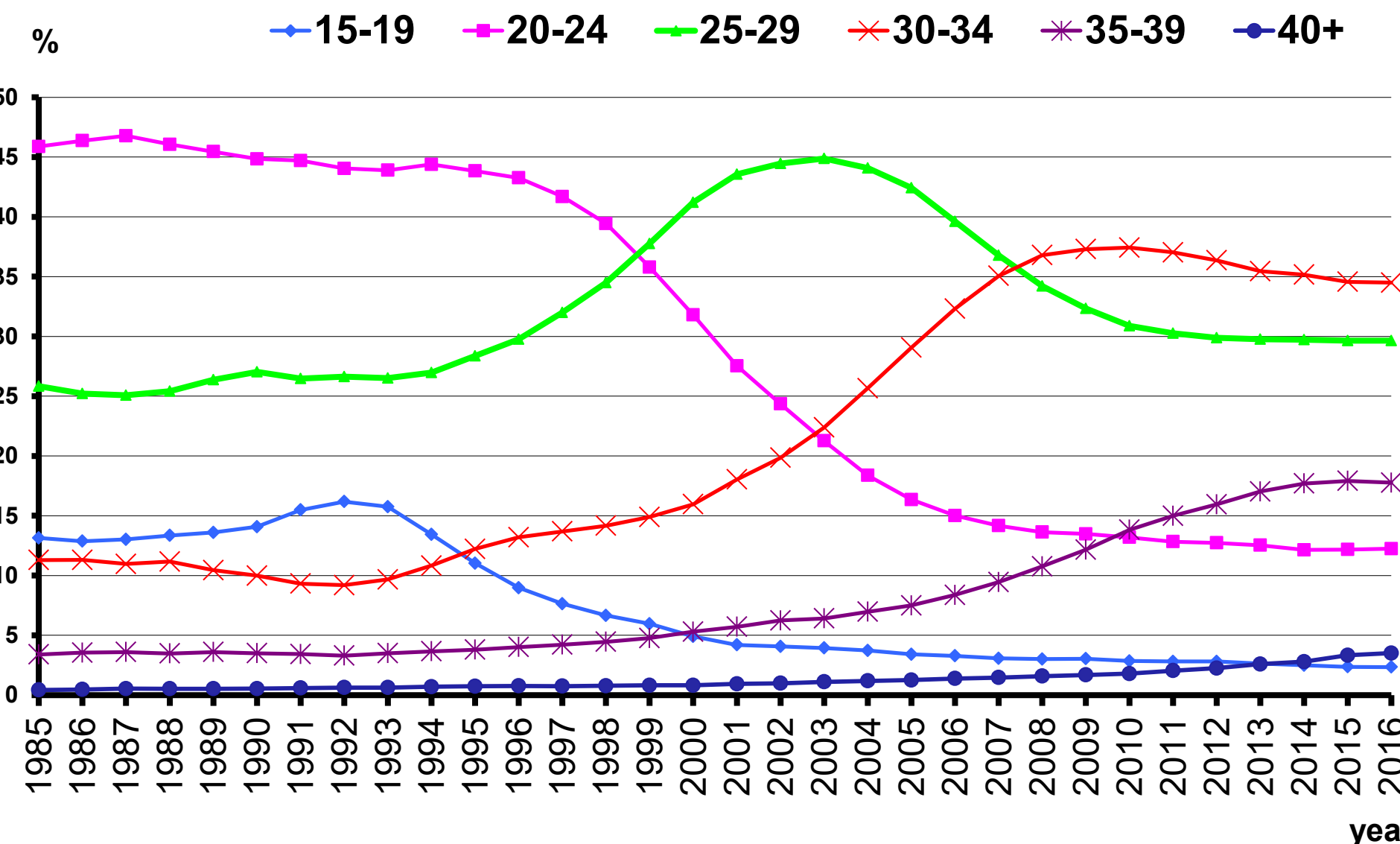
Down syndrome in the Czech Republic (1961 – 2016)



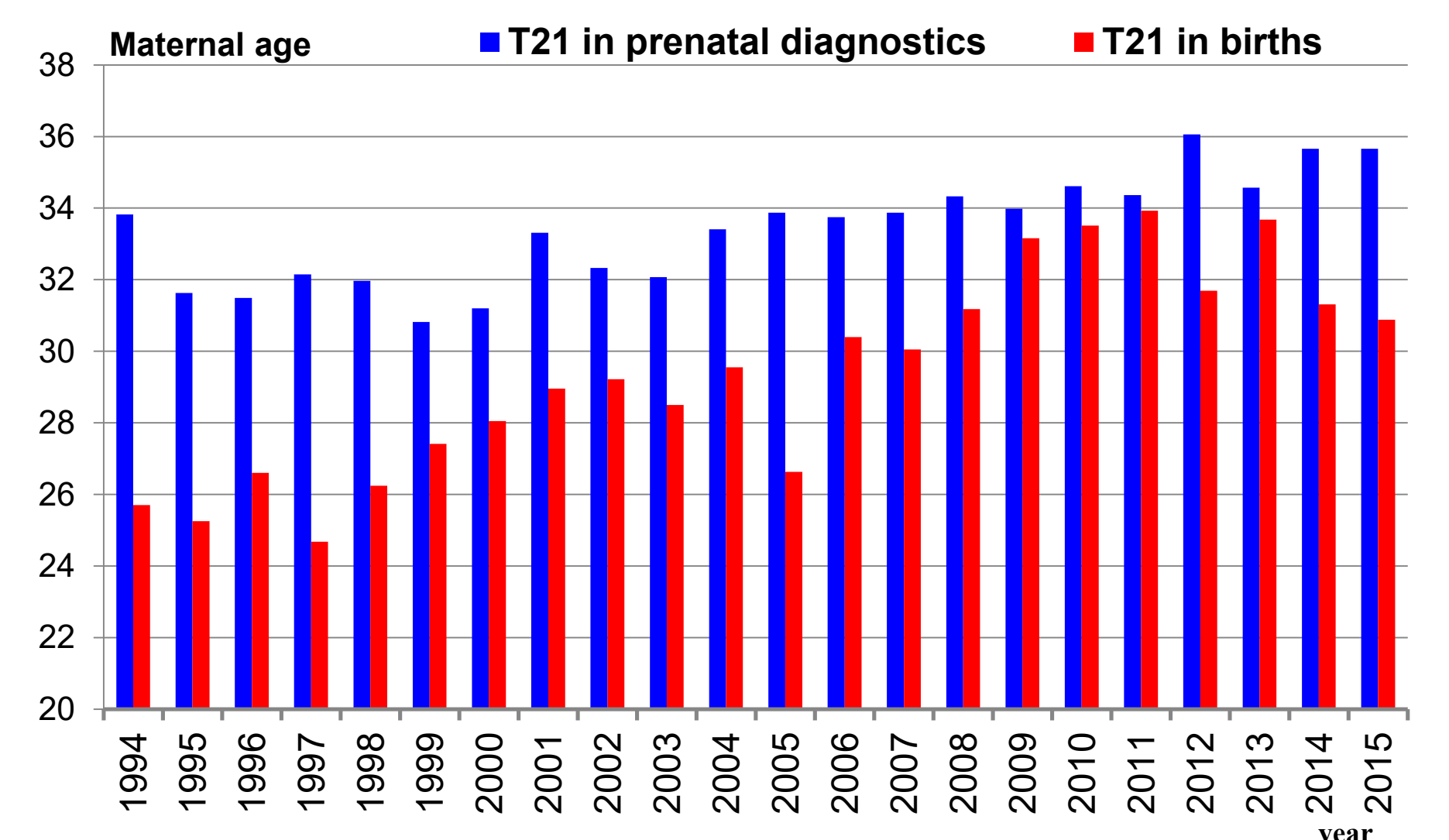
Average maternal age in the Czech Republic



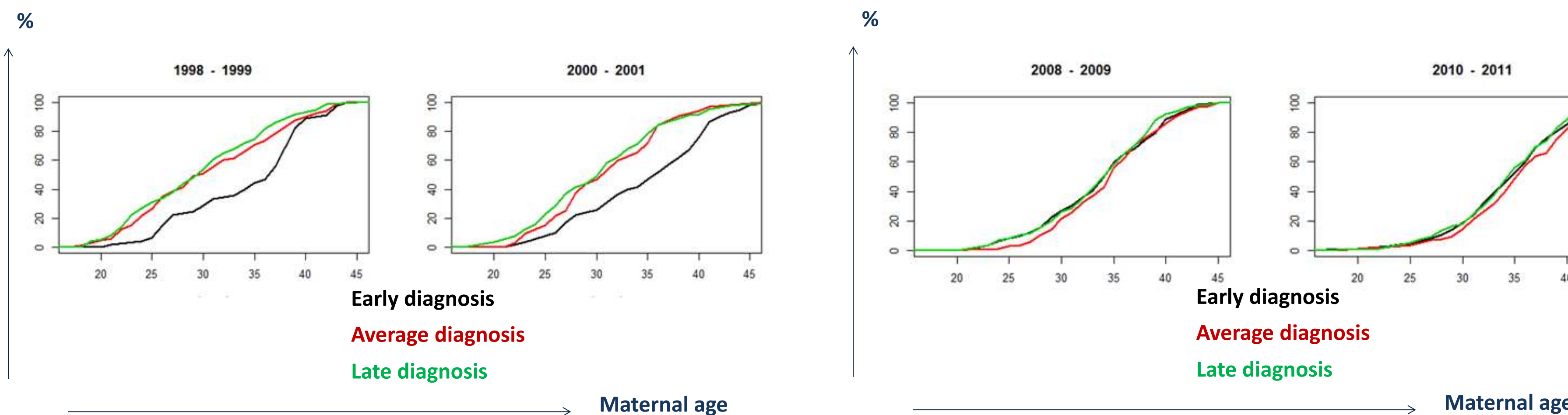
Maternal age trends in the Czech Republic



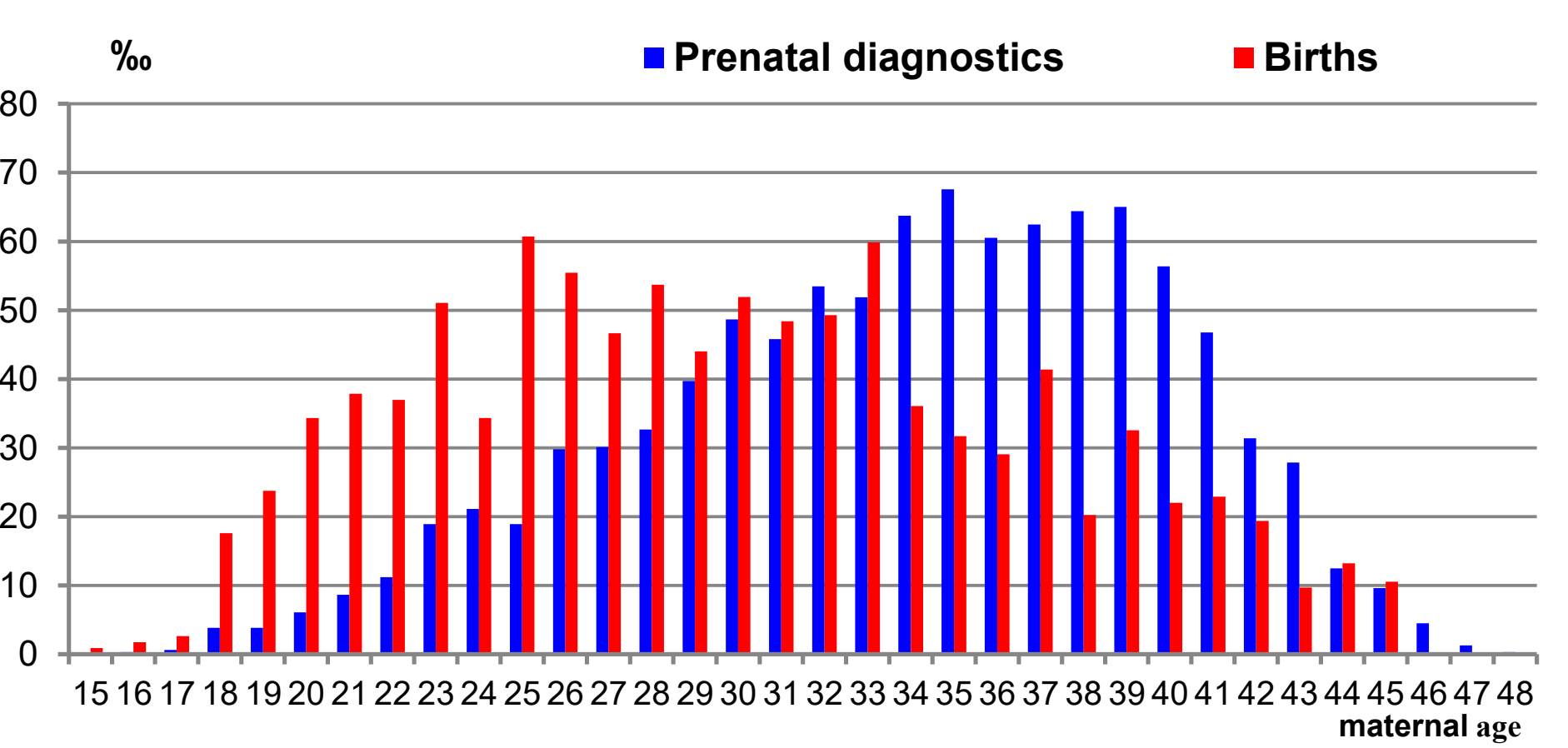
Average maternal age in the Down syndrome cases



Time trends of Down syndrome prenatal diagnostics (gestation week at diagnosis in different maternal age groups)



Down syndrome cases in different maternal age groups



Statistical analysis of differences (gestation week at diagnosis of Down syndrome in different maternal age groups).	Years	EvsA	AvsL	EvsL
	1998-1999	0.039	0.985	0.002
	2000-2001	0.025	0.902	0.001
	2002-2003	0.083	0.586	0.038
	2004-2005	0.827	1.000	0.996
	2006-2007	0.103	0.809	0.725
	2008-2009	0.792	0.766	0.605
	2010-2011	0.412	0.736	1.000

EvsA = Early vs. Average
AvsL = Average vs. Late
EvsL = Early vs. Late

Shown p values were computed using nonparametric Kolmogorov-Smirnov test

Conclusion:

Obviously, there used to be some differences in prenatal diagnostics timing but we do not see them anymore after 2011.

On the other hand, we can still observe differences in the proportion of prenatally and postnatally diagnosed cases of Down syndrome among younger and elder mothers.