National Registry of Congenital Anomalies of the Czech Republic

CHANGING FREQUENCIES OF MAIN AUTOSOMAL TRISOMIES IN THE CZECH REPUBLIC: POPULATION-BASED DATA

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Czech Republic - Infobox

Population: 10 553 843
Area: 78,866 km^2

13 regions and the capital Prague; 76 districts in total

Surveillance - Infobox

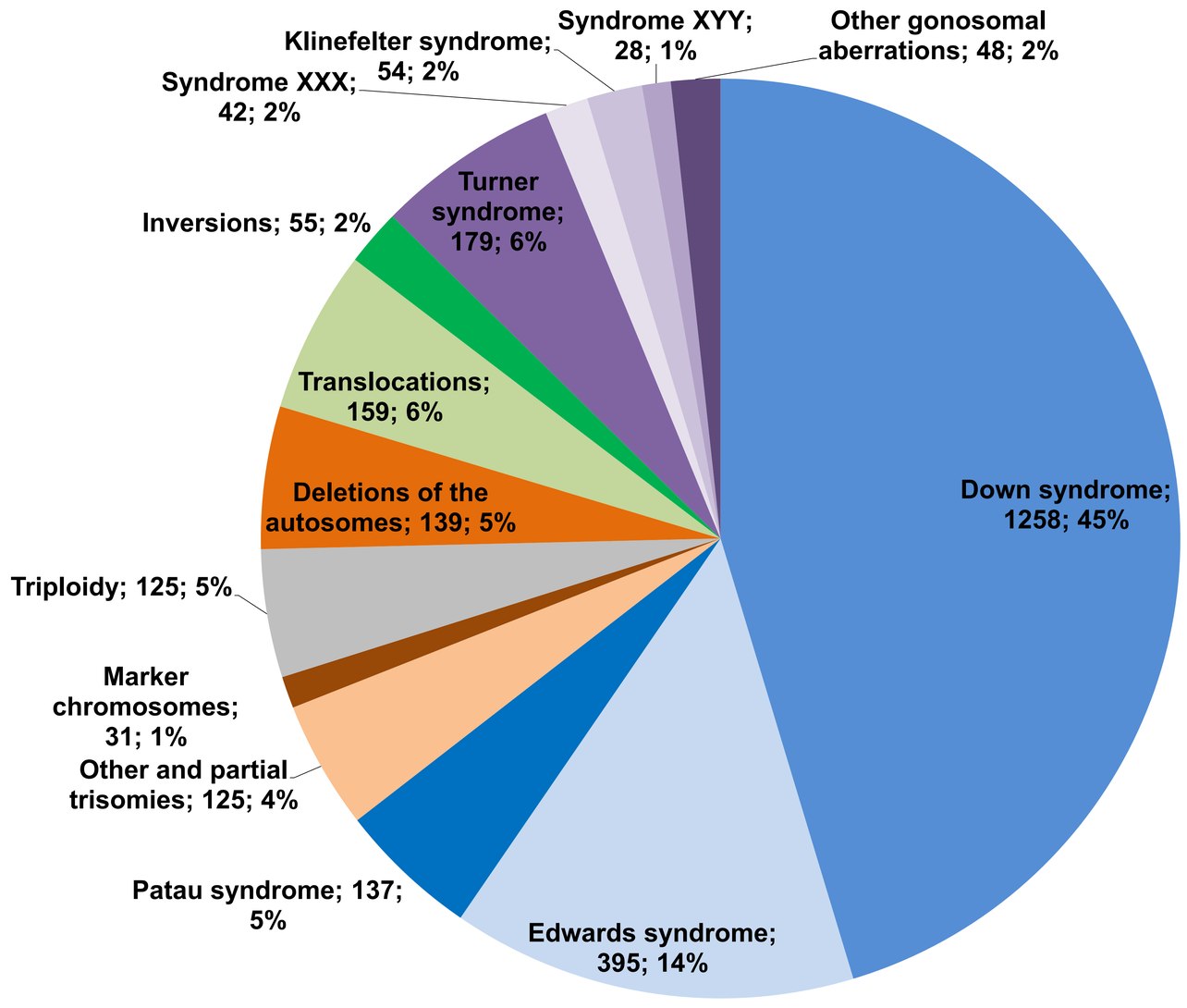
- 50+ years of history; the registry was founded in 1964.
- Population-wide coverage; reporting is compulsory.
- Data are stored in the State Institute of Health Information and Statistics (ÚZIS ČR)
- Multiple sources (geneticists, neonatologists, paediatricians, other specialists).
- Registry includes cases diagnosed in livebirths, stillbirths and prenatally diagnosed cases.
- Termination of pregnancy – legal (up to 24th GW)
- Main classification system: ICD-10 (national)
- No official policy regarding NIPT in pregnancy

Statistical significance

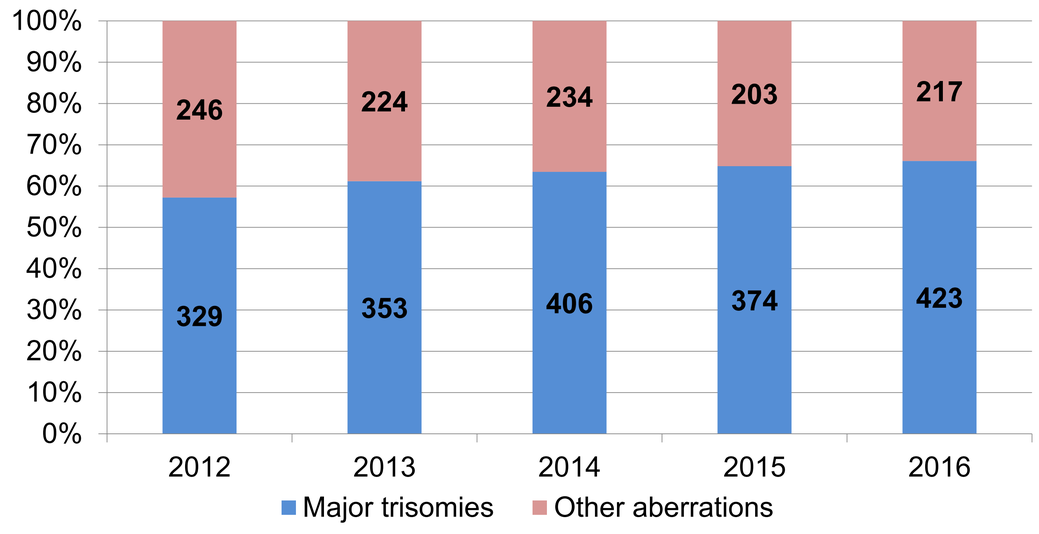
1. The increase in the relative frequencies (per 10 000) of major trisomies is statistically significant (Poisson regression: p = 0.014).
2. The increase in the proportion of major trisomies (compared to the other aberrations) is highly statistically significant (logistic regression: p < 0.001).

Methodics: The trends in the 5-year time series were evaluated applying two variants of generalized linear models (GLM): The relative frequencies per 10 000 live births for each class of trisomies (major, other) were analyzed using the Poisson regression with annual numbers of live births as an offset. The ratios between the numbers of the major and other trisomies were subjected to the logistic regression. A significance level of 0.05 was used for all analyses. Statistical evaluation was carried out by the statistical software R, version 3.4.3 (R Foundation for Statistical Computing, Vienna, Austria).

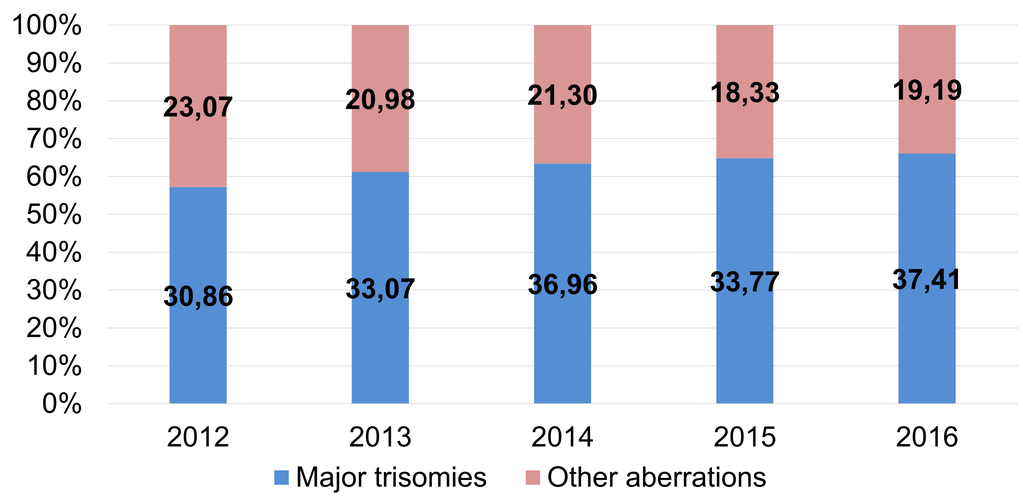
Prenatal diagnostics of chromosomal aberrations in the Czech Republic 2012-2016: all aberrations (absolute nr. and percentage)



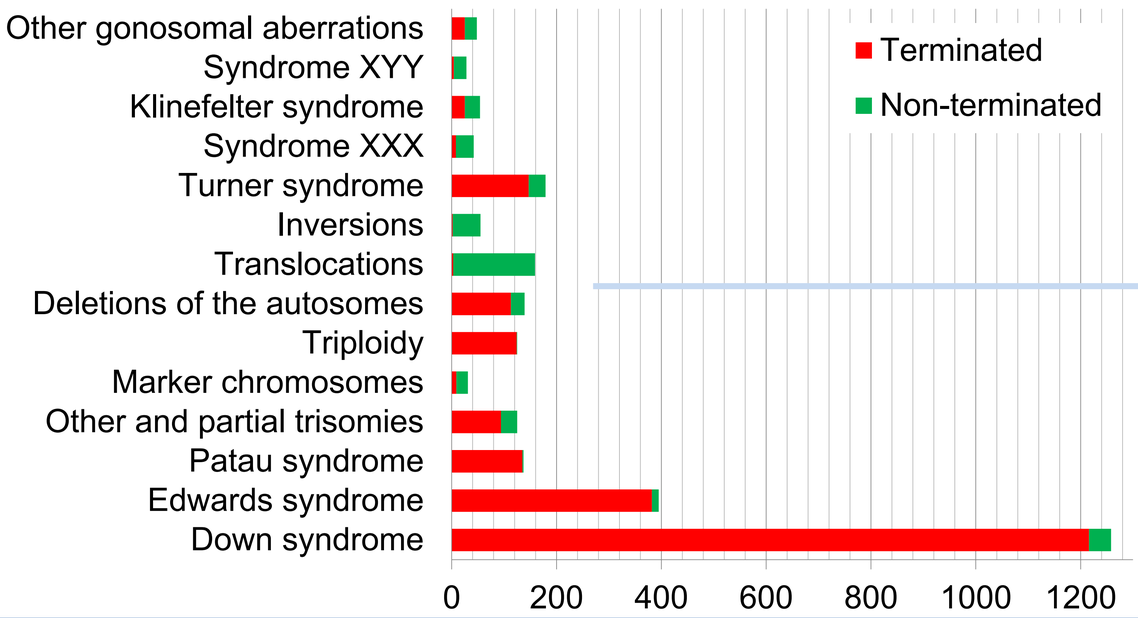
Prenatal diagnostics of chromosomal aberrations in the Czech Republic: 2012-2016; Major trisomies vs other aberrations (absolute numbers)



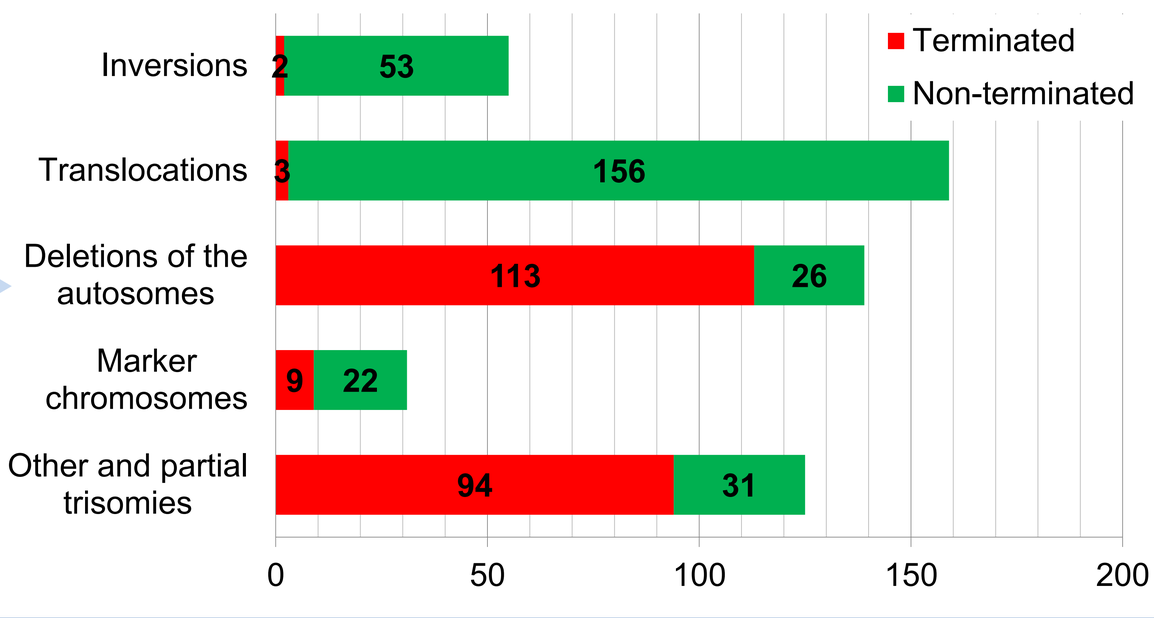
Prenatal diagnostics of chromosomal aberrations in the Czech Republic: 2012-2016; Major trisomies vs other aberrations (relative numbers per 10.000 live births)



Prenatal diagnostics of chromosomal aberrations in the Czech Republic: 2012-2016; all aberrations – absolute numbers



Prenatal diagnostics of chromosomal aberrations in the Czech Republic: 2012-2016; structural aberrations – details (absolute numbers)



http://www.vrozene-vady.cz/

Acknowledgements:
Supported by Ministry of Health of the Czech Republic, grant nr. AZV 17-29622A

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