

3145 Incidence of CML in Europe - a Comparison of 19 European Countries with US SEER Data

Program: Oral and Poster Abstracts

Session: 632. Chronic Myeloid Leukemia: Therapy: Poster II

Sunday, December 7, 2014, 6:00 PM-8:00 PM

West Building, Level 1 (Moscone Center)

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Introduction

As there are only few data available about the incidence, the stage of disease at diagnosis, the treatment and the outcome of chronic myeloid leukemia (CML) in Europe the European Treatment and Outcome Study (EUTOS) for CML collected such data in 27 European countries.

The population-based registry was set up by EUTOS to further explore the epidemiology, characteristics, treatment and outcomes of CML in Europe. The present work focused on the estimation of incidence of CML in Europe, in the single countries participating in the registry and the comparison to existing incidence estimations from the US.

Patients and Methods

The EUTOS population-based registry aimed to document all newly diagnosed adult patients with Ph+ and/or BCR-ABL+ CML at any stage nationwide or in prespecified regions within countries of Europe. Croatia, Cyprus, Estonia, Latvia, Lithuania, Slovakia, Slovenia and Sweden were observed in total while for Austria, the Czech Republic[H1], France, Germany, Italy, the Netherlands, Poland, Russia, Serbia, Spain, Sweden and the United Kingdom specified regions were selected. Population data from the United Nations database were used for calculations in countries that were observed nationwide, while the study groups provided the population numbers of the specified regions for countries that were observed partially only.

The registration period varied between 12 and 60 months in the different countries, from January 2008 to December 2012, registration area covered over 92.5 million inhabitants overall.

Raw and standardized incidences were calculated for the countries and regions and adjusted to the registration period. For standardization the Old Europe Standard Population was used (Waterhouse et al IARC 1976). The registry and the standard population were truncated so only patients from 20 years on were included for the calculation of standardized rates.

To compare and validate the EUTOS estimations we chose the data of the Surveillance Epidemiology and End Results Program (SEER) which cover about 28% of the US population. The data were collected from 2007 to 2011.

Results

There were 2,936 patients registered into the EUTOS population-based registry. Raw incidences per 100,000 inhabitants per year ranged from 0.72 in Poland to 1.39 in Italy. The overall raw incidence for all countries was 1.02, with 0.90 in females and 1.14 in males.

Estimations of standardized incidences ranged from 0.72 in the UK to 1.29 in Italy. Overall standardized incidence was 0.99, with 0.86 in females and 1.12 in males.

Age specific incidences rose with age group. While the incidence in the 18 to 40 years old population was as low as 0.52 (0.61 in males and 0.42 in females) it increased to 1.61 (2.18 in males and 1.26 in females) in the population from 70 years up.

Comparing the SEER data to our EUTOS results very similar incidences can be observed up to age group 55-59 years. From that age group up the SEER incidence estimations are considerably higher. The overall standardized SEER incidences ranged around 1.7 per 100,000 for the years observed. The higher rates can be explained by different inclusion criteria of the registries: While EUTOS includes only Ph+ and/or BCR/ABL+ patients, the SEER has more open inclusion criteria. Also patients without information on Ph-status, BCR-ABL1 negative patients and patients diagnosed with chronic myelomonocytic leukemia are included.

Discussion

The EUTOS population based registry is the first paneuropean prospective study of incidence of CML in Europe. For the first time data about the incidence of CML are available now for most European countries. Raw and standardized incidences from the EUTOS registry fit in well with earlier findings of study groups from countries like the UK (Bhayat et al., *BMC Cancer* 2009; 9; 252) (Phekoo et al *Haematologica* 2006), Sweden (Höglund et al *Blood* 2013), Germany (Nennecke et al *Bundesgesundheitsblatt* 2014) and France (Corm et al *J Clin Oncol* 2008) that range between 0.7 and 1.1 per 100,000 inhabitants. Thus the estimation of incidence over all regions participating in the EUTOS project can serve as a robust estimation of the incidence of CML in Europe.

[H1]Wurde zwar voll beobachtet, zwei Regionen wurden aber ausgeschlossen, da sie nicht garantieren konnten pop-based gewesen zu sein!

Disclosures: Hoffmann: *Novartis*: Research Funding. Lindoerfer: *Novartis*: Research Funding. Castagnetti: *Novartis*, *BMS*,: Consultancy, Honoraria; *Pfizer*: Consultancy. Griskevicius: *NOvartis*: Research Funding. Steegmann: *Novartis*, *BMS*, *Pfizer*: Honoraria, Research Funding. Hehlmann: *Novartis*, *BMS*: Research Funding. Hasford: *Novartis*: Research Funding. Baccarani: *Novartis*, *BMS*, *Pfizer*, *Ariad*: Consultancy, Honoraria, Speakers Bureau.
