Important falls in death rates from leukemia in Europe predicted for 2016

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A Wright's stained bone marrow aspirate smear from a patient with precursor B-cell acute lymphoblastic leukemia. Credit: VashiDonsk/Wikipedia

Death rates from leukaemia among people of all ages in Europe are falling, according to the latest predictions for European cancer deaths in 2016, published in the leading cancer journal Annals of Oncology today.

The study shows that falls in leukaemia death rates will be greatest
among children and young adults of both sexes. Between 2009 and 2016 death rates from leukaemia among children aged 0-14 will fall by 38% in boys and 20% in girls, and by 26% and 22% in young men and women respectively, aged between 15-44. Among men and women aged 45-69 the death rates will fall by 19%.

The authors of the study say that improvements in management, multi-drug chemotherapy, immunotherapies, stem cell transplants, radiotherapy and treatments that have less toxic side-effects have all contributed to the improvement in survival from leukaemia. However, some leukaemias remain hard to treat successfully, particularly those that are more common in adults and the elderly.

Acute lymphoblastic leukaemia is most frequent in children, adolescents and young adults, and it has a five-year survival rate of over 90%. Stem cell transplants and new chemotherapy treatments have improved survival in acute myelogenous leukaemia, which is relatively common in adults and the elderly. However, chronic lymphocytic leukaemia (CLL), which is more common in the elderly, is difficult to cure, although long-term survival has been achieved in chronic myeloid leukaemia due to the introduction of tyrosine kinase inhibitors (drugs that block signals promoting cancer cell growth).

Carlo La Vecchia (MD), Professor at the Faculty of Medicine, University of Milan (Italy), one of the study authors, said: "Predictions of death rates from leukaemia are complicated by the fact that leukaemias are a varied collection of blood cancers, with some being more treatable than others. However, the important falls in overall death rates from this group of diseases are very encouraging and are a testament to the hard work of researchers and clinicians in developing and implementing better diagnosis and treatments. We do not understand much about the causes of leukaemias, and so more research is needed in this area."
The study by researchers in Italy, Switzerland and the USA looked at cancer death rates in the EU 28 member states as a whole and also in the six largest countries - France, Germany, Italy, Poland, Spain and the UK - for all cancers, and, individually, for stomach, intestines, pancreas, lung, prostate, breast, uterus (including cervix) and leukaemias for men and women. This is the sixth consecutive year the researchers have published these predictions and there are encouraging downward trends in deaths from most cancers.

Since 2011 there has been a fall in total cancer death rates in the EU of 8% in men and 3% in women. In 2016 the predicted age standardised rate of deaths in men will be 133.5 per 100,000 of the population and 85.2 per 100,000 in women. As the number of elderly people in Europe is increasing, the actual number of deaths will rise from 734,259 in 2011 to 753,600 in men in 2016, and from 580,528 to 605,900 in women, making a total of nearly 1,359,500 deaths predicted for 2016. However, Professor La Vecchia said: "The absolute numbers of cancer deaths are likely to level off in the future."

He continued: "Although we are seeing declining death rates, the number of new cases of cancer are increasing, placing a growing burden on national health services, and so governments should be aware of this and plan for it."

In men, death rates from lung, colorectal and prostate cancer are predicted to fall by 11%, 5% and 8% respectively since 2011. In women, death rates from breast and colorectal cancer will fall by 8% and 7% respectively, but lung and pancreatic cancer rates will rise by 5% and 4%; in 2016 the death rates from lung cancer in Europe will be 14.4 per 100,000 women (compared to 13.51 in 2011) and 5.6 per 100,000 for pancreatic cancer (compared to 5.39 in 2011).

However, the picture varies from country to country. For instance,
among the six largest countries, although the actual numbers of female deaths from lung cancer will still be the highest in the UK in 2016 than in the other large countries (at 16,400), the rate per 100,000 women has started to fall (from 20.15 per 100,000 in 2013 to 19.37 predicted in 2016), while death rates are still rising in the other countries.

Professor La Vecchia said: "There is a moderate fall in deaths rates in female lung cancer in the UK, although UK rates are still higher than in other EU countries, except Denmark, as British women started to smoke earlier. Rates of deaths for all ages are still comparatively high, but they are levelling off, while rates for the young generation of UK women are lower than in most other large EU countries."

Co-author, Fabio Levi (MD), Emeritus Professor at the Faculty of Biology and Medicine, University of Lausanne, (Switzerland), said: "We need effective tobacco control in European women in order for overall rates to level off at around 15 to 17 per 100,000, and so that subsequently we can start seeing a fall in female lung cancer rates in Europe."


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