Cancer in Europe: New Report, Recent Efforts Take Continent-wide Perspective

By Kate Travis

Patterns of cancer incidence and mortality across Europe are as varied as the continent’s geography. But a new report finds that, in general, obesity and tobacco use are driving cancer incidence, mortality, and survival across Europe: Overall cancer incidence has decreased since the mid-1990s in northern and western Europe except for obesity-related cancers, and incidence of and mortality from tobacco-related cancers is falling among men in northern, western, and southern Europe but increasing in central Europe.

The analysis, published in the June issue of the European Journal of Cancer, comes as two Europe-wide efforts related to cancer take shape: The European Code Against Cancer is about to be updated for the first time in 5 years, and the European Commission is gearing up to create a cancer plan for the entire European Union.

Recent Trends

For the new analysis of cancer rates, Jan Willem W. Coebergh, M.D., Ph.D., professor of cancer surveillance at Erasmus University Medical Centre in Rotterdam, and his colleagues collected incidence and mortality data from 21 cancer registries across Europe and gathered 5-year relative survival estimates from cancer registries and the EUROCare-3 and -4 studies. They looked specifically at changes in cancer rates from the early 1990s to early 2000s. “The enormous variation within Europe is quite interesting because you learn things from that,” Coebergh said. “The value of our paper is that it raises what is really behind the trends. I don’t have the illusion that we provide all the answers in the paper, but we provide a schematic way of looking at it.”

Two risk factors emerged as likely drivers of the recent trends: increasing obesity rates and tobacco smoking among women. For colorectal cancer, which some studies suggest is associated with diet, incidence rates increased slightly between the mid-1990s and the early 2000s among men in most countries and were generally stable among women. The authors speculate that the increasing incidence may be associated with a general change in diet across Europe to include more sugar and meat and less fiber. Mortality rates for colorectal cancer across Europe generally decreased but were high in Denmark (21.0 per 100,000 in males), Norway (18.4), and Ireland (19.6) compared with other countries (for example, 12.6 per 100,000 in males in Sweden and Switzerland).

Breast cancer rates, although influenced by national screening programs, may also be affected by a rise in obesity among postmenopausal women. Incidence rates varied widely across Europe (for example, 41 cases per 100,000 in Croatia to 91 per 100,000 in Italy) and increased in the last decade in most European countries. Trends in mortality and survival were generally favorable.

Tobacco smoking among women has profoundly affected lung cancer trends: Incidence and mortality rates have increased rapidly in the last decade in all but a few countries. Even so, incidence rates still vary widely, from five and six cases per 100,000 in Spain and Lithuania to 37 and 33 per 100,000 in Scotland and Denmark, the authors report. Among men, lung cancer incidence and mortality generally decreased but, again, the rates varied greatly across Europe: Incidence among males is 63 per 100,000 in Poland and 22 per 100,000 in Sweden.

Other trends include steady increases in the incidence of testicular cancer across Europe. For example, in Norway, where incidence was highest, it rose from 8.3 per 100,000 to 10.5 per 100,000 during the study period. “It’s not really a surprise, but it’s a strong change, which you see in many of these countries,” Coebergh said. And mortality from prostate cancer is decreasing in most countries except those in central Europe. “It’s intriguing why that has happened because it is not clear that screening as such could have done it,” he said. He suggests that perhaps increasing prostate cancer awareness and improvements in radiotherapy are behind this trend.

Other Variations

Variations in screening programs and in available treatment are probably driving factors behind many of the trends in other cancers that Coebergh and his colleagues found. In cervical cancer, for example, “it is remarkable how much variation still exists,” Coebergh said. “Even if you stick to screening, it’s clear that countries like Finland and Holland have by far the best programs. Even if you go to Belgium or Germany or to Luxembourg, there’s enormous variation.”

But screening programs are fully implemented in only a few countries, notes Tit Albreht, M.D., D.Sc., of the Institute of Public Health of the Republic of Slovenia. “In many countries this represents a challenge ... because we know the implementation of a cancer screening program entails more than just the actual organization of screening but also the organization of
treatment of these patients. And you have to allocate sufficient funds because you cannot then undermine their chances by saying they’re subject to cost containment measures or restrictions of the system.”

His country, for example, implemented its national cervical cancer screening program just 5 years ago. The program is probably too new to affect incidence rates—according to Coebergh’s analysis, cervical cancer incidence on Slovenia increased from 13.2 per 100,000 to 15.0 per 100,000—but the annual percent change shows that the rates are beginning to decline. For colorectal cancer in Slovenia, incidence and mortality have increased in men; the country will begin its nationwide colorectal cancer screening program later this year. The program is “responding to the fact that there’s an increasing epidemic of colon cancer,” Albreht said.

**International Agenda**

Slovenia played a critical role in the recent adoption of several cancer-related recommendations by the European Council. “Slovenia decided to pick up cancer as the main topic of its presidency because of its extreme importance and its future implications,” Albreht said. (The European Council presidency rotates every 6 months among European countries. Slovenia held the presidency for the first half of 2008 and coordinated its cancer efforts with Portugal, which held the presidency for the second half of 2007.)

The Slovenian government put together a project called Fighting Against Cancer Today, which, through a series of workshops and meetings, produced a book published in February called *Responding to the Challenge of Cancer in Europe*. “Our intention was that the book represented a resource book with the current knowledge and state of the art in the year 2008,” Albreht said. The group presented its conclusions to the health ministers of the European Union, and in June, the European Council approved a series of conclusions on reducing the burden of cancer in Europe. Its statements include that the council “invites” member states to create and implement national cancer strategies or plans aimed at disease prevention, healthy lifestyle, and evidence-based treatment of patients.

It also encourages the European Commission to “present an EU Action Plan on Cancer, which will address all aspects of comprehensive cancer control, including prevention, early detection, diagnosis, treatment, rehabilitation, and palliative care through a multidisciplinary approach and consider the appropriate framework for effective cancer control policies and sharing best practices in cancer prevention and care.” Any movement toward a European cancer plan is still preliminary at this stage, but according to a statement by EU Health Commissioner Androulla Vassiliou, the European Commission will have a cancer plan ready by next year.

Such efforts are challenging at the European level because responsibility for health care lies with the national governments, and the European Commission cannot dictate how a country runs its national health service. “In Europe it’s not so easy to have [a single] vision because all the countries have their own views and own priorities,” Coebergh said.

The key will be to promote implementation of certain public health, screening, and treatment programs by giving successful examples—not by demanding their implementation, Albreht says. “It’s nice to hear when someone says that every EU citizen has a right to top-quality care,” he said. “But it’s not realistic. We cannot say that citizens of Latvia or Bulgaria will have the same access to top available cancer care as somebody living in Germany or France or the UK.”

As experts consider what would be effective in a Europe-wide cancer plan, they will probably look to the European Code Against Cancer, a series of evidence-based recommendations to individuals and to member states that target public health (recommendations include not smoking, avoiding obesity, and being physically active) and screening (for breast, cervical, and colorectal cancers).

“This is a particularly useful tool to set priorities and disseminate primary and secondary cancer prevention strategies among the general population,” said Jose Martin-Moreno, M.D., Ph.D., Dr.P.H., professor of medicine and public health at the University of Valencia Medical School in Spain.

The International Agency for Research on Cancer will be updating the European Code Against Cancer by the end of this year, said Philippe Autier, M.D., head of IARC’s epidemiology and biostatistics cluster. Autier noted that for the latest revision, the committee updating the code will probably revisit the relationship between hormone replacement therapy and breast cancer and the human papillomavirus vaccine. “This type of document needs to be renewed regularly in order to take into account the latest research developments,” said Martin-Moreno, who worked on the 2003 revision of the code and will be on the latest committee as well.

And as they update the document, they will consider recent studies such as Coebergh’s trend analysis. “In my opinion, it’s not possible to establish a strategy without first carefully considering the evidence, including the trends and possible hypotheses to explain them,” Martin-Moreno said. “The [Coebergh et al. article] can contribute to this evidence base—not as the only and definitive one, but it is certainly a relevant article to take into account when developing a cancer policy for Europe.”

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