THE LANCET

Press Release

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SUBSTANTIAL 15-YEAR SURVIVAL GAINS FROM STANDARD **BREAST CANCER TREATMENTS**

The types of chemotherapy and hormonal therapy that have long been used to help prevent press office@lancet.com breast cancer recurrence have much greater effects on 15-year than on 5-year survival, according to a study published in this week's issue of *The Lancet*. This extra effect is one of the main reasons why breast cancer death rates have been falling rapidly ever since the early 1990s in the UK, the USA, and some other countries, state the authors.

Please mention The Lancet as the source of this material

Issued by Udani Samarasekera, Press Officer, The Lancet

In early breast cancer, surgery (or surgery and radiotherapy) can appear to remove all traces of the disease, but undetected deposits of cancer cells may remain that could, over the next 5, 10 or 15 years, develop into a life-threatening recurrence. Chemotherapy and/or hormonal therapy are often given as additional treatments in early breast cancer to help prevent recurrence, and can improve 5-year survival.

The Early Breast Cancer Trialists' Collaborative Group coordinated the world's largest collaborative analysis of cancer trials, bringing together data from 145,000 women with early breast cancer in 194 randomised trials. The study includes information on various treatments that were being tested in the 1980s, and have since been widely used, such as 6 months of anthracycline-based chemotherapy (in which an anthracycline is combined with two older drugs, fluorouracil and cyclophosphamide) and 5 years of tamoxifen.

The investigators found that where both chemotherapy and hormonal therapy are appropriate they can approximately halve the 15-year risk of death from breast cancer. For example, if a 50-year-old women had a one in 5 risk of dying from her hormone-sensitive breast cancer, then this risk could be halved, to about one in 10. For middle-aged women with breast cancer, 6 months of anthracycline-based chemotherapy reduces the breast cancer death rate over the next 10 or 15 years by about one third. For women of any age with hormone-sensitive early breast cancer, the commonest form of the disease, 5 years of tamoxifen also reduces the breast cancer death rate over the next 10 or 15 years by about one third. For middle-aged women with hormone-sensitive disease, a combination of both of these treatments halves the breast cancer death rate. The authors note that while chemotherapy and tamoxifen can have unpleasant short-term side-effects, any long-term side effects are much smaller than the long-term survival benefits.

The analysis is restricted to trials that began by 1995, so none of the available studies involved taxanes, trastuzumab, or modern aromatase inhibitors.

Professor Sarah Darby (Clinical Trial Service Unit, University of Oxford, UK), who helped coordinate the collaboration, comments: "For middle-aged women with hormone-sensitive breast cancer, six months of anthracycline-based chemotherapy and five years of tamoxifen halves the long-term risk of death from the disease. Such treatments have been used widely for several years and were endorsed by a US consensus panel in 2001. Although newer treatments are now gaining favour, the eventual long-term benefits from older treatments such as these are one of the main reasons why breast cancer mortality rates are now falling rapidly in countries such as the UK or USA."

She adds: "This is the largest analysis of randomised evidence ever done in any type of cancer. Because so many women in previous decades agreed to join these randomised trials, millions of women in future decades will benefit." (Quote by e-mail; does not appear in published paper)

In an accompanying Comment Karen Gelmon (British Columbia Cancer Agency, Vancouver, Canada) and colleagues state: "The most impressive finding is the divergence of the survival curves for breast cancer over time . . . The survival curves suggest that adjuvant systemic therapies do cure a proportion of women with early-stage breast cancer, rather than simply delaying recurrence; a finding that is reassuring to both oncologists and patients after 30 years of debate on the principle of [whether to use] adjuvant therapy in early breast cancer."

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Notes to editors

The Medical Research Council and Cancer Research UK fund the cancer research carried out in the Clinical Trial Service Unit, Radcliffe Infirmary, Oxford, UK.

See **Annex-Figure 14** on the article for country-specific graphs of the recent changes in breast cancer mortality in the UK, US, Australia, Bulgaria, Canada, Czechoslovakia (former), France, Hungary, Italy, Japan, Netherlands, Poland, Romania, Russian Federation & Spain.

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KEYHOLE SURGERY SET TO BECOME THE NEW GOLD STANDARD FOR COLON CANCER TREATMENT

Keyhole surgery for colon cancer is as effective as open surgery in the short term, concludes a randomised trial published in this week's issue of *The Lancet*.

Treatment for colon cancer involves surgical excision of the primary tumour. Keyhole surgery may lead to a more rapid recovery, less pain, fewer complications and a shorter hospital stay. However, it has been widely adopted for colorectal cancer without data from large clinical trials to support its use.

Pierre Guillou (St. James's University Hospital, Leeds, UK) and colleagues undertook a trial to compare keyhole surgery with open surgery, involving around 730 colorectal cancer patients, from 27 centres around the UK. 253 patients received open surgery and 484 received keyhole surgery. 143 patients underwent conversion from keyhole surgery to open surgery. Based on detailed pathological examination of the resected bowel, which contained the tumour, the investigators found that local recurrence rates were unlikely to be higher for keyhole surgery than for local surgery. They also found that cancer-related survival and quality of life was similar for the two groups. Conversions from keyhole to open surgery were more common in patients with cancer of the rectum; and individuals who had their operation converted had the most complications from surgery.

Professor Guillou concludes: "For cancer of the colon, little difference seems to exist between keyhole surgery and open surgery and there is no reason to expect long-term cancer outcomes to be different. However, impaired short-term outcomes after keyhole surgery for rectal cancer do not yet justify its routine use."

In an accompanying **Comment** Myriam J Curet (Stanford University, California, USA) states: "Keyhole surgery for colon cancer has not been adopted as quickly by the surgical community as other keyhole procedures. In part, the technical challenges of the operation have prolonged the learning curve and minimised enthusiasm. In addition, major concerns about the oncological effects of the operation in patients whose disease has spread have limited its application in colorectal cancer. However, this trial suggests that in appropriately selected

patients who are operated on by experienced surgeons, keyhole surgery for colorectal cancer may be the new gold standard."

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THE LANCET CALLS FOR HIGHER TAX ON CIGARETTES

Governments of high, middle, and low income countries should commit to annual price increases of 50% on cigarettes to prevent a worldwide epidemic of lung cancer, states an editorial in this week's issue of *The Lancet*.

Lung cancer has become the most common cancer worldwide. Of the 1.4 million individuals diagnosed with the disease this year, more than 85% will die before 2010. These deaths are the legacy of smoking habits from 20 years ago. Two decades from now, with smoking rates falling in many high-income countries, people living in low and middle income countries will be the worst affected, states the editorial.

Public-information campaigns and regulation have helped curb smoking rates in the UK, Canada, the USA, and northern Europe. But in many developing countries poor literacy, poverty, and underdeveloped health systems have hindered the dissemination of antismoking messages. Within 20 years, 75% of people dying from cancer will be in the developing world. What is really needed, to reduce the demand for a product that causes 5 million deaths globally a year—almost 10% of the world's all-cause mortality—are aggressive tobacco taxation policies, states the editorial. The World Bank estimates that a price increase of 10% can reduce demand for tobacco products by 4% in high income countries and by 8% in low and middle income countries.

The Lancet comments: "We urge all governments to commit to annual price increases of 50%. That is the only way to begin to reduce demand for a product that causes such endemic tragedy. If the cause of lung cancer were an infectious agent, millions—if not billions—of pounds would have been poured into an eradication campaign. There is no such natural contagion, however, for lung cancer. Instead, the single, human-made causative factor is flourishing. Tobacco manufacturers continue ruthlessly to promote a

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pastime that will kill 50% of those who acquire the habit. The least we should do is match this 50% mortality with a 50% tax."

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