From the Countries

NORWAY

Exercise reduces breast cancer risk

Exercise reduces the risk of breast cancer a prospective study of 25,624 women shows. High levels of physical activity at work also has a positive effect. The risk was lowest in lean women who exercised at least 4 hours per week. There was a more pronounced effect among premenopausal than postmenopausal women, and in women under 45 years of age at study entry.

These findings, made by Dr Inger Thune and colleagues at the University of Tromsø, Norway, were after adjustments for age, body-mass index, height, parity and county of residence.

In total, 351 women developed breast cancer during the average follow-up period of 14 years in this Norweigen population of women. Greater leisure-time activity was associated with a reduced risk of breast cancer with an RR of 0.63 (95% CI: 0.42–0.95) compared with sedentary women.

In lean women exercising more than 4 hours a week, the RR was 0.28 (95% CI: 0.11–0.70). In women less than 45 years who exercised, the RR was 0.38 (95% CI: 0.19– 0.79) [1].

According Dr Anne McTiernan of the Fred Hutchinson Cancer Research Center, Seattle, in her editorial in the journal: "Regular physical activity in women reduces overall mortality and the incidence of coronary heart disease, diabetes mellitus, stroke, osteoporosis, obesity and disability, and it also lessens the impact of such chronic ailments such as arthritis and cognitive decline." However, she feels that a causal relation between exercise and reduced risk of breast cancer has not yet been proven: "As compared with sedentary women, women who exercise regularly have higher levels of education and income, smoke less, drink less alcohol, have different menstrual and reproductive patterns, and consume fewer calories and less fat."

1. Thune I, Brenn T, Lund E, Gaard M. Physical activity and the risk of breast cancer. *N Engl J Med* 1997, **336**, 1269–1275.

IRELAND

Tumour recurrence and death in early colorectal cancer

Hope that a simple algorithm might soon distinguish early colorectal cancer cases at high risk of tumour recurrence and death, was expressed by Irish researchers.

Dr Hugh Mulcahy and colleagues found in their retrospective study of 117 patients with stage B cancer that the long-term outcome of their patients could be related to discrete clinicopathological variables. The investigators write, "This finding may be useful because adjuvant therapy has been shown to improve survival in patients at high risk of tumour recurrence. In addition to clinical and histologic assessments, future studies might also benefit from the inclusion of immunohistochemical, enzymatic and molecular biologic assessments."

After a median follow-up of 8.2 years, [1] bowel obstruction was significantly related to a poor prognosis. Extensive necrosis and perineural invasion were also associated with decreased survival. Vascular invasion was associated with poor long-term outcome in the subgroup of patients with rectal but not colonic cancer. Multivariate regression analysis identified both tumour necrosis and perineural invasion as independently related to outcome.

1. Mulcahy HE, Toner M, Patchett SE, Daly L, O'Donoghue DP. Identifying stage B colorectal cancer patients at high risk of tumour recurrence and death. *Dis Colon Rectum* 1997, **40**, 326–331.

U.K.

Antisense agent for non-Hodgkin's lymphoma performs well in first clinical trial

The first clinical trial of Anticode G3139, an antisense molecule, has provided promising early results in patients with non-Hodgkin's lymphoma. The initial results, published in the *Lancet*, show that 4 patients have shown improvements and in one, the tumour has completely disappeared.

Said Dr David Cunningham, head of the Lymphoma Unit at the Royal Marsden and principal clinical investigator of the study, "The results are far better than we anticipated at such an early stage of the drug's development. The treatment also seems to be largely devoid of the type of side-effects often associated with traditional therapies."

The drug is designed to interfere with the *BCL2* gene, which at high level of activity, produces a protein that prevents cells from dying off naturally. The antisense molecule would block this process, allowing cells to self-destruct as normal [1].

1. Webb A, Cunningham D, Cotter F, *et al* BCL-2 antisense therapy in patients with non-Hodgkin's lymphoma. *Lancet* 1997, **349**, 1137–1141.