

Ovarian cancer



NEWS

RESEARCH HIGHLIGHTS



Diet can influence ovarian cancer survival, study suggests

A diet high in fruit and vegetables has been linked to an increased ovarian cancer survival rate by a recent study carried out at the University of Illinois, (IL, USA).

The study set out to evaluate the hypothesis that ovarian cancer patients whose prediagnosis diet closely reflected health recommendations experience a survival advantage compared with women with ovarian cancer who had previously reported poorer diets.

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A sample of 341 women from Illinois diagnosed with incident epithelial ovarian cancer between 1994 and 1998 were studied. These women had all previously participated in a case-control study that collected demographic, clinico-pathologic and lifestyle-related information including details regarding diet. The participants had each completed a food questionnaire. The data collected from these questionnaires were categorized using the Dietary Guidelines for Americans 2005.

The study found that higher total fruit and vegetable consumption, as well as higher vegetable consumption alone led to a survival advantage. A statistically significant improvement in survival was also observed for women who regularly ate healthier grains, whereas higher intakes of less-healthy meats were linked to a survival disadvantage.

Further subgroup analyses demonstrated that only yellow vegetables and cruciferous vegetables, such as those belonging to the

cabbage and cauliflower family, had a significant association with longer survival time. The association between high-meat diets and shorter survival rate was specifically linked to the red and cured/processed meats subgroups.

“The study findings suggest that food patterns 3–5 years prior to a diagnosis of epithelial ovarian cancer have the potential to influence survival time,” the authors explain in the recent *Journal of the American Dietetic Association* article.

The study concluded that prediagnosis adherence to healthy diets reflecting recommendations for optimal nutrition and cancer prevention may have benefits that continue even once an ovarian cancer patient has been diagnosed.

The findings corroborate earlier work by Nagel *et al.*, and are among the few studies carried out so far that look at the potential link between diet and ovarian cancer prognosis.

Current evidence suggests that there are benefits to having healthy diet before ovarian cancer diagnosis. Future studies should test whether an improvement in eating patterns after diagnosis would have any beneficial effect upon cancer recurrence and survival rate.

Lead author Therese Dolecek from the School of Public Health University of Illinois (IL, USA) commented that “well-designed future studies that evaluate the long-term effects of pre- and post-diet on ovarian cancer outcomes will be necessary to confirm and better understand the real implications of our study findings.”

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 Source: Dolecek TA, McCarthy BJ, Joslin CE *et al.*: Prediagnosis food patterns are associated with length of survival from epithelial ovarian cancer. *J. Am. Diet. Assoc.* 110(3), 369–382 (2010).



Cancer antigen 125 levels may predict survival and recurrence in high-risk ovarian cancer

Levels of the ovarian epithelial cancer biomarker cancer antigen (CA)125, measured following the first cycle of chemotherapy, could be used to predict the outcome of high-risk early-stage epithelial ovarian cancer, results of the Gynecologic Oncology Group 157 study suggest.

A normal level of CA125 observed in ovarian epithelial cancer after the first chemotherapy cycle was associated with both recurrence-free survival and overall survival.

The findings were presented by John Chan from the University of California (CA, USA) at the recent Society for Gynecologic Oncologists' 2010 Annual Meeting on Women's Cancer in San Francisco.

The study evaluated data from a total of 213 women, who had been enrolled in a Phase III trial subsequent to primary surgery for ovarian cancer. All patients studied had undergone a chemotherapy regime consisting of treatment with three or six cycles of carboplatin/paclitaxel.

After one cycle of chemotherapy 74% of patients were observed to have normal CA125 levels and 88% of the women studied achieved normal CA125 levels after two cycles of chemotherapy.

Recurrence-free survival was noted in 81% of women who had normalized CA125 after one cycle of therapy compared with 65% of women after two cycles.

After the first cycle of chemotherapy, the rate of recurrence-free survival was 87% in patients whose CA125 levels had remained normal. Recurrence-free survival was 80% for those women whose levels had fallen from elevated to normal. Women whose CA125 levels remained elevated after chemotherapy demonstrated a 68% recurrence-free survival rate.

Overall survival was also best for those women whose CA125 levels remained normal throughout, with an overall survival rate of 92%. The overall survival rate was 88% for women whose levels decreased from elevated to normal and 77% for those patients whose CA125 levels remained elevated.

"CA125 is an important prognostic factor and may help us individualize treatment in subgroups of these patients with early-stage, high-risk disease," Chan explained in the presentation.

Source: *HemOnc Today*: www.hemonctoday.com/article.aspx?rid=62298

Study suggests elderly women with ovarian cancer receive slower specialist referral

Older women with suspected ovarian cancer are not referred to a specialist as quickly as younger women, a recent UK study suggests.

Research published in the *British Journal of Cancer* implies that age has an impact on how women with ovarian cancer are managed in the UK.

Rosemary Tate and colleagues (Brighton and Sussex Medical School, UK) used the General Practice Research Database to

identify women aged 40–80 years diagnosed with ovarian cancer between the years 2002 and 2007.

Analysis of this sample population demonstrated that 66% of women aged over 70 years had been referred to a specialist in the year before their diagnosis, compared

with 75% for women aged 55–69 years and 82% of women under the age of 55 years.

The study found that the average delay between the presentation of the first symptom and referral for gynecological investigation was 10 weeks for women



aged 45–69 years. This figure doubled for women aged between 75 and 79 years, with an average delay of approximately 20 weeks.

“Our research suggests that age plays a role in how quickly diagnosis and referral occurs – the older the patient, the later this appears to happen,” remarked Rosemary Tate, the study’s lead author. “If this is the case, then such delays could be an important cause of avoidable illness and mortality.”

The paper cautioned that if the findings extend to other cancers, delays in specialist referral or lack of referral may partly explain the poor mortality rates observed in older UK cancer patients.

Peter Reynolds, chief executive of Ovarian Cancer Action (Hertfordshire, UK) also commented that “Women’s chances of surviving ovarian cancer greatly improve if the disease is diagnosed at an early stage, so prompt referral by GPs could play a significant role in improving the UK’s poor survival rates for ovarian cancer.”

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Sources: Tate AR, Nicholson A, Cassell JA: Are GPs under-investigating older patients presenting with symptoms of ovarian cancer? *Observational study using General Practice Research Database. Br. J. Cancer* 102, 947–951 (2010) (Epub ahead of print); BBC News: <http://news.bbc.co.uk/1/hi/health/8545105.stm>; Medwire News: www.medwire-news.md/45/86922/ObGyn/Older_women_underinvestigated_for_suspected_ovarian_cancer.html.

Analgesic painkillers may decrease estrogen levels, possibly contributing to reduced ovarian cancer risk

Previous studies have suggested that regular use of analgesics may decrease the risk of breast and ovarian cancer.

In a recent study, hormone-mediated mechanisms for these associations were investigated. Researchers examined the relationship between use of aspirin, non-aspirin NSAIDs, acetaminophen and sex steroid hormone concentrations among 740 postmenopausal women (average age 61.5 years) from the Nurses’ Health Study.

All women in the study reported their analgesic use in 1988 or 1990 and provided a blood sample between 1989 and 1990. The adjusted geometric mean estrogen and androgen levels for each category of analgesic was calculated, as well as the p-value for trend with increasing frequency of use.

No association between days of use per month of aspirin, nonaspirin NSAIDs or acetaminophen in 1990 and hormone levels was found. However, significant inverse trends between the estimated number of

aspirin tablets per month in 1988 and concentrations of estrone and estrone sulfate were observed.

Frequency of use of all analgesics in 1990 was inversely associated with concentrations of estradiol, free estradiol, estrone sulfate and the estradiol:testosterone ratio. In women who regularly used aspirin or nonaspirin NSAIDs, the average estradiol levels were 10.5% lower compared with women who never used the drugs. Similarly, free estradiol levels were 10.6% lower and estrone sulfate levels were 11.1% lower among regular users of aspirin or other NSAIDs. Among regular users of any analgesic (aspirin, NSAIDs or acetaminophen), levels of these hormones were 15.2, 12.9 and 12.6% lower, respectively.

The authors conclude that, among postmenopausal women, regular users of aspirin and other analgesics may have

lower estrogen levels than nonusers, which could contribute to a decreased risk of breast or ovarian cancer among analgesic users.

“Our results suggest that among postmenopausal women, regular users of aspirin and other analgesics may have lower estrogen levels than nonusers,” explained lead author of the study Margaret Gates (Brigham and Women’s Hospital and Harvard Medical School, USA). “Although the overall risks and benefits would need to be weighed, analgesics could be implemented as a chemopreventive and may decrease the risk of several cancers,” Gates suggested.

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Source: Gates MA, Tworoger SS, Eliassen AH, Missmer SA, Hankinson SE: Analgesic use and sex steroid hormone concentrations in postmenopausal women. *Cancer Epidemiol. Biomarkers Prev.* (2010) (Epub ahead of print).