Today, positive estrogen receptors (ER+) identify women who require endocrine therapy, and HER2/neu positivity those who require trastuzumab and also benefit most from anthracyclines.
Tamoxifen (T) plus ovarian ablation or suppression (OA) or T alone are currently accepted as standard adjuvant endocrine therapies (ET) in young women with ER+ early BC.
The additional benefit of chemotherapy (CT) for premenopausal patients with endocrine-responsive BC who receive combined ET with OA and T (or an aromatase inhibitor) remains an open question.
In the future more sophisticated molecular factors may identify those patients who require ET alone, CT alone, newer biologic therapies, or combinations of these approaches.
CT, ET, and local therapies have the potential to significantly impact both the physiologic health-including future fertility, premature menopause, and bone health-and the psychological health of young women as they face a diagnosis of BC. Better tools and strategies to manage these long-term consequences of the disease and related treatments need to be implemented and monitored and health care professional should systematically address in advance these issues when dealing with young patients.
As many unanswered questions remain, it is also important to increase the accrual of young women with early BC in clinical trials focused on this important patient population.

299 INVITED

Strategies to preserve fertility in young breast cancer patients

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Abstract: Approximately 10% of all breast cancers appeared in women under 39 years. Improved treatment of breast cancer in premenopausal patients increased survival rates, but the therapy may influence fertility and ovarian function. Currently there is a big public and individual interest of breast cancer affected women in preservation of ovarian function and fertility. Chemotherapy induced amenorrhea (CIA) has many objective (osteoporosis, cardiovascular, urogenital atrophy, cognitive etc.) and subjective (hot flushes, sleep disturbances, change of mood etc.) consequences. In patients with breast cancer who wish to avoid a CIA and to preserve their fertility ovarian protection by GnRH agonists, cryopreservation of operative sampled ovarian tissue or obtained fertilized or non-fertilized eggs after stimulation and puncture or embryos after in vitro fertilization are technically possible. However there are no evidence-based recommendations for preservation of fertility or ovarian function in breast cancer patients. Except the cryopreservation of embryos all other procedures are experimental. It is also undefined who is going to carry the costs. Moreover, there are recent data that the reappearance of ovarian hormones may stimulate occult tumor cells in hormone sensitive breast cancer. Therefore it seems necessary to inform breast cancer patients about the possible negative effects of preservation of ovarian function.

300 INVITED

Child-bearing in breast cancer survivors

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Over the last decades time of childbearing has been steadily postponed in the western world. Therefore, an increasing number of women are seeking medical advice concerning pregnancy after treatment of breast cancer. Since oestrogen is an established growth factor in breast cancer, it has been discussed whether women should be advised against pregnancy subsequent to breast cancer treatment because of the fear of a negative prognostic effect of the high oestrogen levels associated with pregnancy.
The literature on the subject has been sparse, and the majority of the studies is small and methodological insufficient. Lately some harder evidence has appeared indicating that pregnancy after breast cancer treatment does not worsen prognosis. In the latest update on material from Danish Breast Cancer Coopertive Group, DBCG, 371 women experienced pregnancy after treatment of breast cancer (1). In a multivariate analysis that included age at diagnosis, stage of disease, and pregnancy history prior to diagnosis, women who had a full-term pregnancy subsequent to breast cancer treatment were found to have a reduced risk of dying (relative risk: 0.73; 95% confidence interval: 0.54−0.99) compared with other women with breast cancer. The effect was not significantly modified by age at diagnosis, tumour size, nodal status, or pregnancy history before diagnosis of breast cancer. Furthermore, neither spontaneous abortions nor induced abortions subsequent to breast cancer treatment seem to influence the prognosis. Overall, the fertility rate is reduced to one third, and the incidence of induced abortion is significantly increased among women treated for breast cancer.
Breast cancer is potential life-threatening disease, but many women do get cured. On the basis of the present knowledge women believed to be cured from breast cancer should not be advised from getting pregnant.

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Scientific Symposium (Thu, 24 Sep, 09:00−11:00)
New directions in the treatment of gastric cancer

301 INVITED

Changing epidemiology of gastric cancer – influence on treatment strategies and outcome

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In spite of the decreasing trend worldwide, gastric cancer is still the 4th most common malignancy in incidence and the 2nd most common cause of cancer death. The most remarkable change in gastric cancer epidemiology in recent decades is shift of the primary tumor location from distal to proximal, which was the most dramatic in Western countries like Europe and US. So, the incidence of lower esophageal (EA) and esophagogastric junction adenocarcinoma (EGJA) has increased rapidly in Western countries, while the incidence of gastric non-cardiac adenocarcinoma (GA) has decreased. This shift of primary tumor site can be attributed to several factors; increasing gastroesophageal reflux disease related to obesity, decreased H. pylori infection, and increased consumption of fresh fruits and vegetables with decreased consumption of salt or salted foods. In contrast, such a change has not been so apparent in East Asian countries like Korea and Japan. There is a minimal tendency of decreasing incidence of gastric cancer in this region as well. But, the incidence of gastric cancer is still very high and no change is noticed in the incidence of EA and EGJA. Because of this change in epidemiology of gastric cancer worldwide, issues have been raised for the proper management of gastric cancer.
Among the issues, the most critical question would be 'could EA and/or EGJA be managed in the same principle as GA?' In etiology, EA is known to be associated with gastroesophageal reflux, while GA develops associated with H. pylori infection. EA also shows different clinical behavior from GA. Because of lack of serosal envelope and the rich submucosal lymphatic network, esophageal cancer can easily develop extensive local infiltration and lymph node involvement. So, the TNM staging classification for GA cannot be applied to EA. For localized tumors, treatment of EA is different from GA. Esophagectomy, either transthoracic or transhiatal, is necessary for EA, but not for GA. Since EGJA develops between esophagus and stomach, both staging systems for EA and GA have been used for EGJA. But, recent studies suggest that EGJA is etiologically and clinically closer to EA than GA. For metastatic or recurrent tumors, systemic chemotherapy is indicated in both EA and GA. Chemotherapeutic agents active for both EA and GA were not so different. So, in many UK clinical trials of systemic chemotherapy for GA mostly include EA as well as EGJA. And, inclusion of two tumor types different in etiology and biology in a clinical trial was justified with a recent UK study showing no difference in outcome with conventional cytotoxic chemotherapy among EA, EGJA, and GA. But, recent studies of targeted agents suggest that there may be difference in response to targeted agents among these tumors. For instance, Dragovich et al. reported that erlotinib was active in EGJA, but inactive in GA. Recent ToGA study also suggested that efficacy of HER2 targeting therapy would not be the same between EGJA and GA because HER2 overexpression was more frequently found in EGJA than in GA. These indicate that EA would be better treated separately from GA or EGJA. And, for the global phase III trials of cytotoxic or targeted therapy on gastric cancer, either location of the primary gastric tumor (EGJA vs GA) or geographical region (Western vs East Asia) should be included in stratification factors for randomization.

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