

Introduction

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In 2006, invasive breast cancer is estimated to be diagnosed in 212,920 women and 1,720 men in the US, thus affecting women at a rate almost 200 times that of men. The description of breast tumors as a primary phenomenon of the female gender is documented in medical writings dating as far back as those contained in the ancient Egyptian papyrus acquired by Edwin Smith, which document cases of breast tumors as early as 1600 B.C. It would take nearly 2,000 years to recognize that the predominance of breast disease in women had a relationship to the chemical differences that exist between women and men. Even before the function of the ovaries was recognized, Beatson reported in 1896 that removal of the ovaries in two women with advanced breast cancer resulted in tumor regression. The link between the breasts and the ovaries was thus established.

Since that time we have learned much about the role of hormones in the etiology, promotion, and progression of breast cancer, as well as in its prevention and treatment. The issue of endogenous hormones and breast cancer risk is addressed in the article by Susan E. Hankinson. This topic is further explored in the article by Velie et al.

Exposure to exogenous hormones in the form of menopausal hormone therapy has also been implicated in the etiology of postmenopausal breast cancer. Significant epidemiological evidence supports a role of progestins in breast cancer etiology and the role of progestins in breast cancer is reviewed in the article by Aupperlee et al. The role of menopausal therapy has been investigated in animal studies and these studies are described in two articles by Cline and Haslam, respectively. Knowledge of the role of estrogens in the promotion and growth control of breast tumors, forms the basis for chemoprevention and treatment of breast cancer. These topics are covered in the articles by Gellar and Vogel, and Lewis and Jordan, and by Buzdar.

Of the 212,920 women to be diagnosed with breast cancer in 2006, 163,948 will be postmenopausal. It is our hope that the articles in this issue will highlight the challenges of determining the mechanistic basis for the role of hormones in the etiology of postmenopausal breast cancer and bring attention to the advancements and challenges still facing effective prevention and treatment of this disease.