Many patients with breast cancer experience gynecologic problems during or after breast cancer treatment. Some of these problems are caused by chemotherapy or hormonal therapy; others are caused by low estrogen
levels resulting from chemotherapy, hormonal therapy, or prophylactic oophorectomy; and still others are unrelated to breast cancer or its treatment. Women who receive myelosuppressive chemotherapy are more likely to suffer vulval and vaginal infections as such chemotherapy can affect ovarian function and thus alter the vaginal ecosystem. Dyspareunia in patients with breast cancer may be due to loss of secretion of the secondary sexual glands, spasm of muscles around the vagina, or aggravation of psychosexual problems that existed before the breast cancer diagnosis. Low estrogen levels resulting from oophorectomy or medications that suppress ovarian function can exacerbate urinary incontinence. Patients taking tamoxifen for breast cancer prevention are at increased risk for endometrial carcinoma and require careful monitoring. The evaluation of abnormal vaginal bleeding, uterine or vaginal prolapse, and uterine or ovarian enlargement in breast cancer patients is similar to the evaluation of these problems in patients without breast cancer. Vaginal sonography and hysteroscopy are useful diagnostic tools in patients with vaginal bleeding or other pelvic symptoms. More and more women are asking gynecologists about prophylactic oophorectomy. This surgery may be appropriate in women with a genetic predisposition to ovarian cancer.

**INTRODUCTION**

Many patients with breast cancer experience gynecologic problems during or after breast cancer treatment. Some of these problems result from the effects of cytotoxic or hormonal therapies; other problems are unrelated to breast cancer treatment but may require special management in patients with breast cancer or breast cancer survivors. It is hoped that this chapter will increase awareness of special gynecologic problems affecting patients with breast cancer among the physicians involved in the care of these patients.

In this chapter, we will discuss the diagnosis and management of clinical problems that are frequently seen among patients with breast cancer referred to the Gynecologic Oncology Center at M. D. Anderson Cancer Center. Several of these problems, including infections of the vulva and vagina, vaginal bleeding, and dyspareunia, are related to estrogen deprivation resulting from chemotherapy, hormonal therapy, prophylactic oophorectomy, or the myelosuppressive effects of chemotherapy. We will also discuss uterine and vaginal prolapse, urinary incontinence, tamoxifen-related gynecologic problems, uterine and ovarian enlargement, and prophylactic oophorectomy. The use of vaginal sonography and hysteroscopy as aids for assessing gynecologic problems in breast cancer patients will also be discussed.