

cervical glands may not be seen by visual inspection of the cervix and can be missed by Pap smear screening. Less common malignancies, such as vulvar cancer, anal cancer, and pharyngeal cancer, are also linked to HPV infection.

Diagnosis of Cervical Cancer Early cancer of the cervix is asymptomatic, and this biology underlies the recommendations for routine gynecologic care. Larger, invasive carcinomas often have symptoms or signs including postcoital spotting or intermenstrual cycle bleeding or menometrorrhagia. Foul-smelling or persistent yellow discharge may also be present. Symptoms such as pelvic or sacral pain suggest lateral extension into the pelvic nerve plexus by either the primary tumor or a pelvic node metastasis and indicate advanced-stage disease. Likewise, flank pain from hydronephrosis from ureteral compression or deep-venous thrombosis from iliac vessel compression suggests either extensive nodal disease or direct extension of the primary tumor to the pelvic sidewall. The most common finding upon physical exam is a visible tumor on the cervix, but deeper tumors in the cervical os and glands should be considered. Larger tumors may be identified by inspection and biopsied directly. Staging of cervical cancer is performed by clinical exam. Stage I cervical tumors are confined to the cervix, whereas stage II tumors extend into the upper vagina or paracervical soft tissue (**Fig. 89-2**). Stage III tumors extend to the lower vagina or the pelvic sidewalls, whereas stage IV tumors invade the bladder or rectum or have spread to distant sites. While radiographic studies are not part of the formal clinical staging of cervical cancer, treatment planning requires them for appropriate therapy. CT can detect hydronephrosis indicative of pelvic sidewall disease but is not accurate at evaluating other pelvic structures. MRI is more accurate at estimating uterine extension and paracervical extension of disease into soft tissues typically bordered by broad and cardinal ligaments that support the uterus in the central pelvis. Very small stage I cervical tumors can be treated with a variety of surgical procedures, but minimally invasive surgery has inferior outcome compared to standard open hysterectomy. In young women desiring to maintain fertility, radical trachelectomy removes the cervix with