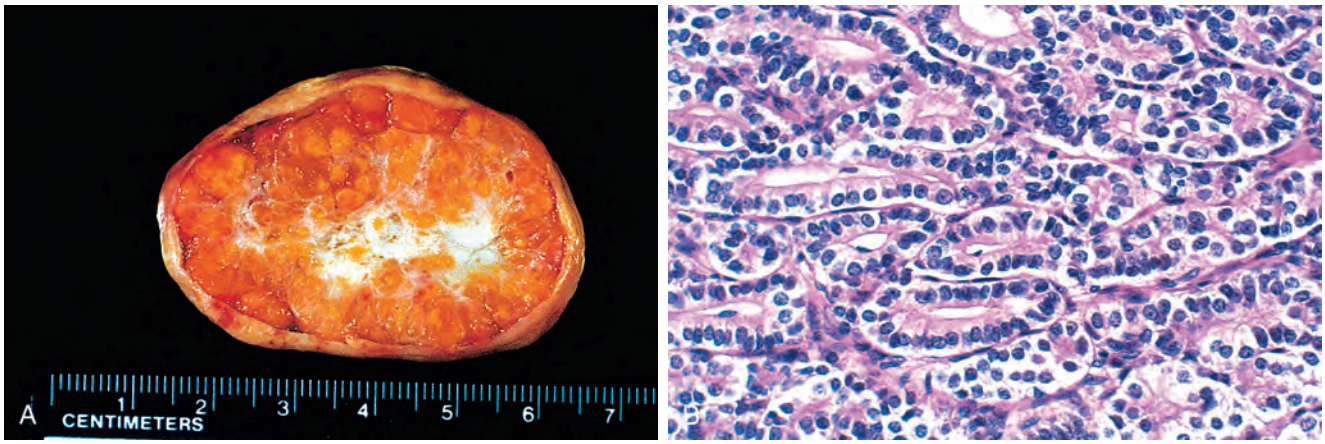

Figure 22-45 Sertoli cell tumor. **A,** Gross photograph illustrating characteristic golden-yellow appearance of the tumor. **B,** Photomicrograph showing well-differentiated Sertoli cell tubules. (Courtesy Dr. William Welch, Brigham and Women's Hospital, Boston, Mass.)

hirsutism, voice changes, and clitoral enlargement, but these changes are milder than those seen in association with Sertoli-Leydig cell tumors. The tumors produce predominantly testosterone. Treatment is surgical excision. True hilus cell tumors are almost always benign.

- *Pregnancy luteoma* refers to a rare tumor that closely resembles the corpus luteum of pregnancy. These tumors may produce virilization in pregnant patients and their female infants.
- *Gonadoblastoma* is an uncommon tumor composed of germ cells and sex cord-stroma derivatives resembling immature Sertoli and granulosa cells. It occurs in individuals with abnormal sexual development and in gonads of indeterminate nature. Eighty percent of patients are phenotypic females, and 20% are phenotypic males with undescended testicles and female internal secondary organs. A coexistent dysgerminoma occurs in 50% of the cases. The prognosis is excellent if the tumor is completely excised.

KEY CONCEPTS

Sex Cord-Stromal Tumors

- Granulosa cells tumors are the most common malignant tumor in this category. They are indolent tumors, but can recur 10 to 20 years after resection of the primary tumor. They are often hormonally active and are associated with endometrial hyperplasia/cancer.
- Fibromas are relatively common benign tumors composed of fibroblasts. They are predominantly unilateral and are generally hormonally inactive.
- Pure thecomas are rare but may be hormonally active.
- Sertoli-Leydig cell tumors commonly present with masculinization and less than 5% recur or metastasize.

Metastatic Tumors

The most common metastatic tumors of the ovary are derived from tumors of müllerian origin: the uterus, fallopian tube, contralateral ovary, or pelvic peritoneum. The most common extra-müllerian tumors metastatic to the ovary are carcinomas of the breast and gastrointestinal tract, including colon, stomach, biliary tract, and pancreas. Also included in this group are the rare cases of pseudomyxoma peritonei, derived from appendiceal tumors. A classic metastatic gastrointestinal carcinoma involving the ovaries is termed *Krukenberg tumor*, characterized by bilateral metastases composed of mucin-producing, signet-ring cancer cells, most often of gastric origin.

GESTATIONAL AND PLACENTAL DISORDERS

Diseases of pregnancy and pathologic conditions of the placenta are important causes of fetal intrauterine or perinatal death, congenital malformations, intrauterine growth retardation, maternal death, and morbidity for both mother and child. Only those disorders for which recognition of morphologic features contribute to an understanding of the clinical problem are discussed here. These include selected disorders of early pregnancy, late pregnancy, and trophoblastic neoplasia.

Understanding placental disorders requires a working knowledge of normal placental anatomy. The placenta is composed of chorionic villi (Fig. 22-46*A, B*) that sprout from the chorion to provide a large contact area between the fetal and maternal circulations. In the mature placenta, the maternal blood enters the intervillous space through endometrial arteries (spiral arteries) and circulates around the villi to allow gas and nutrient exchange (Fig. 22-47). The deoxygenated blood flows back from the intervillous space to the decidua and enters the endometrial veins. Deoxygenated fetal blood enters the placenta through two umbilical arteries that branch radially to form chorionic arteries. Chorionic arteries branch further as they enter the