Prostate Anatomy

The prostate gland sits below the urinary bladder and surrounds the urethra. Its superior borders include the bladder and seminal vesicles and the urogenital diaphragm delineates its inferior boundary. The gland is bordered anteriorly by the pubic symphysis and posteriorly by the rectum. The prostate is separated from the rectum by 2-3mm fascial layer[1](#_ENREF_1), and can be easily palpated on rectal examination.

The gland can be divided from superior to inferior into the base, midgland and apex. The urethra enters the prostate proximally at the base and extends to the midgland at which point the ejaculatory ducts open into the urethra at the verumontanum.[1](#_ENREF_1) The urethra then continues past the apex and travels through the penis. The prostate can be divided into glandular and non-glandular components. The glandular components include the transitional zone, central zone and peripheral zone. Each zone contains approximately 5%, 20% and 70-80% of glandular tissue, respectively.[2](#_ENREF_2) The non-glandular components include the anterior fibromuscular stroma and the urethra.

Although not a true capsule, an outer band of fibromuscular tissue surrounds the prostate.[2](#_ENREF_2) This “capsule” is important when assessing the extraprostatic extension of cancer as tumor can spread by disrupting this tissue. Two neurovascular bundles course posterior and lateral to the prostate, which can also be invaded by malignant cells.

**1.** Jung AJ, Westphalen AC. Imaging Prostate Cancer. *Radiologic Clinics of North America.* 2012;50(6):1043-1059 %@ 0033-8389.

**2.** Bonekamp D, Jacobs MA, El-Khouli R, Stoianovici D, Macura KJ. Advancements in MR imaging of the prostate: from diagnosis to interventions. *Radiographics.* 2011;31(3):677-703 %@ 0271-5333.