Prostate-specific antigen (PSA) levels are used to diagnose and stage prostate cancer, and to monitor response to treatment (normal levels are <4 ng/mL). Although men with BPH also have elevated PSA levels, almost two-thirds of those with a PSA greater than 10 ng/mL have prostate cancer (Tierney et al., 2001).

Transrectal ultrasonography (TRUS) is used when the DRE is abnormal or if the PSA is elevated.

Prostatic biopsy must be performed and interpreted before the diagnosis of prostate cancer can be established.

Either needle biopsy or a TRUS-guided biopsy is performed. Implications for nursing care are presented in the box below.

Grade and stage help to determine prognosis and guide treatment decisions. Grade (cancer cell differentiation) is determined by the pathologist. Prostate cancer is staged with a variety of tests. Table 47–3 outlines treatment options according to the stage of the cancer.

Bone scan, MRI, or CT scans may be performed to determine the presence of tumor metastasis.

### Nursing Implications for Diagnostic Tests

#### Prostate Biopsy

**Preparation**
- Assess the man's understanding of the procedure. The procedure is becoming common, and many men will have heard about it from friends or family and may have significant anxiety. Especially if the man has experienced uncomfortable or perhaps painful rectal examinations in the past, the prospect of a needle advanced through the rectum into the gland can be frightening. Be sure to describe the procedure fully, and explain what the man will feel. Inform the man that he will be awake and lying on his side. (The examination can also be performed in the sitting, supine, or lithotomy position.) A local anesthetic (2% lidocaine jelly) will be applied to the rectum to minimize pain caused by stretching of the rectal wall. Because the pain receptors in the rectum respond only to stretch, the man will feel no pain as the needle penetrates the rectal wall. The ultrasound probe is inserted in the rectum approximately 10 cm, and then a balloon covering the probe is inflated with water to visualize the prostate. The man will feel a sensation of rectal fullness and possibly pain. Many men describe it as very uncomfortable. The biopsy instrument is inserted next to the probe. Men may feel a sharp pain (a “pinch”) as the biopsy is obtained. Reassure the man that the nurse will be with him throughout the procedure to provide support.
- A signed consent should be in the man's chart, as this procedure is invasive.
- Some urologists require a preoperative bleeding profile and complete blood count. The man is often advised to avoid aspirin products and nonsteroidal anti-inflammatory agents for a week before the biopsy.
- An enema is usually administered prior to the examination to ensure a clean rectum.

**Teaching**
- You will be monitored for approximately 1 hour after the examination to ensure that your vital signs are stable and that you can urinate without difficulty.
- Avoid any strenuous activity for the rest of the day.
- Hematuria (blood in the urine) and some bloody streaks in the stool are expected for 24 to 48 hours after the procedure. You can also expect hematospermia (blood in the ejaculate) for a few days to 2 weeks afterward, depending on how often you ejaculate.
- Report any signs of unusual bleeding, such as blood clots in your urine or bloody stools, or infection, such as rectal pain, dysuria, and urgency.

### Table 47–3 Prostate Cancer Staging and Treatment

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| I     | Confined to prostate, nonpalpable, focal involvement; well differentiated | Observation and follow-up  
Interstitial or external-beam radiation therapy  
Radical prostatectomy |
| II    | Confined to prostate, palpable, involves one or both lobes; poorly differentiated | Careful observation in selected clients  
Radical prostatectomy  
Interstitial or external-beam radiation therapy  
Ultrasound-guided percutaneous cryosurgery |
| III   | Extension of the tumor outside the prostate capsule, possible seminal vesicle involvement | External-beam radiation therapy  
Interstitial radiation  
Radical prostatectomy  
Adjuvant hormone therapy  
Palliative surgery (TURP) |
| IV    | Extension of the tumor into surrounding tissues; lymph node involvement or distant metastasis | Hormone therapy  
External-beam radiation therapy  
Palliative treatment with radiation therapy and/or TURP  
Radical prostatectomy with orchietomy  
Chemotherapy |