

nodes. Bone metastasis is usually multiple and characteristically osteoblastic although osteolytic lesions may be found occasionally. Metastasis to lungs and liver may also be found. The prognosis of prostate carcinoma is related to stage, grade (Gleason grading), safety of surgical margin, and tumor volume. The existence of PSA and androgen receptor in the cancer plays a role in influencing the prognosis. Negative immunohistochemical staining for PSA and androgen receptor in the tumor cells usually means an aggressive clinical course should be followed.

This is a typical case of prostate carcinoma at stage D2 (modified Jewett staging system) with metastases to the lymph nodes and lungs. Androgen deprivation treatment such as orchiectomy was the first choice for the patient. Nevertheless, median survival time for patients at stage D2 is about 2 to 3 years. Most patients die within 5 years. Dismal outcome for patients is reasonably expected.

### **PATHOLOGICAL DISCUSSION**

An autopsy was performed on the patient, and the most important finding was that the prostate was totally replaced by a firm ill-defined whitish tumor (Fig. 2). The tumor had extended beyond the prostate capsule and had invaded the adjacent structures including the urinary bladder, bilateral seminal vesicles, and rectum. Microscopically, the prostate showed a pic-

ture of poorly differentiated adenocarcinoma (Gleason scoring: 5+5=10) made up of tumor cells in diffusely infiltrating pattern (Fig. 3). Both the transitional and peripheral zones were involved. There were many lymphatic tumor emboli, as well as perineural invasion. The carcinoma had distant metastasis to the vertebral bodies of the thoracic and lumbar areas of the spines, bilateral lungs, and the right pleura with 1500 cc of serosanguineous effusion. Lymph nodes in the pulmonary hilum, bilateral neck, perigastric area, and retroperitoneum revealed metastatic adenocarcinoma. Both the liver and spleen showed a picture of extramedullary hematopoiesis, which might be due to long-term bone marrow failure caused by bone metastasis.

The aorta and the right carotid artery showed atherosclerosis with calcified and fibrotic atheroma plaques. The right and left coronary arteries also showed marked stenosis of the lumen (more than 50% stenosis) with atheroma plaques. The cause of death was thought to be multiple and systemic metastasis of the prostatic adenocarcinoma and compromised circulatory condition.

**Pathological Diagnosis:** Prostatic adenocarcinoma, poorly differentiated, with invasion to rectum, urinary bladder, seminal vesicle, and with metastasis to lymph nodes, lungs, pleura, and bone.