- **"moth-eaten" destructive radiolucencies of medulla and erosion of the cortex with expansion**

Ewing's sarcoma is an uncommon, highly lethal, round cell sarcoma of bone of uncertain origin. The most common sites for Ewing's sarcoma are the pelvis, the thigh, and the trunk of the body. When the jaws are involved, there is predilection for the **ramus of the mandible**. Ninety percent of Ewing's sarcoma occur between the ages of 5 and 30 years. and over 60% affect males. **See picture # 39 in booklet**

Pain, usually of an intermittent nature, and **swelling** of the involved bone are often the earliest clinical signs and symptoms of Ewing sarcoma. Involvement of the mandible or maxilla may result in facial deformity, destruction of alveolar bone with loosening of teeth, and mucosal ulcers. Fever, leukocytosis, raised ESR, and anemia are also present.

Radiographically, the most characteristic appearance is that of a **moth-eaten destructive radiolucency** of medulla and erosion of the cortex with expansion. A variable periosteal **"onion-skin"** reaction may also be seen. **See picture #40 in booklet**

Histologically, it is often difficult to distinguish this tumor from a neuroblastoma or a reticulum cell sarcoma, however, the cells of Ewing sarcoma contain **glycogen**.

The highly malignant nature of this sarcoma is reflected in its propensity for metastasis, especially to lungs, other bones, and the lymph nodes. Multiple method treatment protocols, including surgery or radiation for local control and chemotherapy for systemic micrometastases have dramatically improved the formerly dismal 10% 5-year survival rate to a 60% 5-year survival rate.

Important: The most common osseous malignancies are **osteosarcomas,** followed by chondrosarcomas, fibrosarcomas and Ewing sarcoma.