# Maxillo-facial radiology case 107

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Below are clinical and radiographic pictures of neoplasms which most commonly affect the jaws. Describe the important radiological features. What is your diagnosis?

## INTERPRETATION

Carcinoma is the most common malignancy of the oral cavity. The neoplasm may affect any part of the jaws. Invasion of the jawbones by continuity is a frequent occurrence in carcinomas originating on the alveolar ridge and the gingival. A comparison between frequency of mandibular and maxillary osseous involvement in cases of oral mucosal carcinoma has shown a higher degree of invasion of the maxilla. Patients normally present with an ulcerative lesion (upper clinical picture), pain, loosening of teeth, pathological fracture (upper-right, cropped pantomograph) and parasthesia. Radiographic examination is necessary to determine whether the jawbone is involved in a carcinoma of soft-tissue origin. In the mandible, the osseous involvement begins, in most cases, on the top of the alveolar ridge, causing destruction of the underlying bone, mostly in a U-shaped form (upper-left, cropped pantomograph). The edges may be distinct, ill-defined or, at times, slightly ragged. There is no evidence of bone production within the excavation. The lower pictures show a squamous carcinoma involving the skin of the cheek, massive destruction of the left mandible, and a pathologic fracture. The lower right picture is a T2W MRI image of the same patient. Note the invasion of the floor of the mouth, and destruction of the buccal and lingual cortical plates of the mandible. The mechanism of bone involvement is either by extension of the carcinoma along nutrient channels, passing through the Haversian system of the cortex, or through direct erosion of the bone by the advancing tumour. The bone is being destroyed through osteoclastic activity, and the marrow spaces are replaced by connective tissue, which is the site of chronic inflammation. The spread of a carcinoma often occurs along the inferior neurovascular bundle.

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