

2. In determining whether the growth be simple or malignant, the surgeon will experience much difficulty, so long as it is confined to the cavity of the antrum, but when once it has perforated and passed beyond its walls, this point is easily solved. Yet, even whilst the tumor is still confined within the antrum, much light may be thrown upon its nature by attention to the rapidity of its growth; the greater this is, the more reason to suspect that it is malignant. Too much importance, however, must not be attached to this sign, for though as a rule fibrous, cartilaginous and bony tumors may increase less rapidly than the malignant, yet they may attain a very great bulk in a very short time. The age of the patient is of very little value in the diagnosis; I think, however, as a rule that the simple tumors occur more frequently in the young, whilst the malignant forms of the affection are more commonly met with in the middle and advanced periods of life. It must be remembered, however, that the sarcomata, which runs an essentially malignant course, infiltrating surrounding parts, and recurring in internal organs, do not, as a rule, affect the lymphatic glands. When once a malignant tumor has passed beyond the cavity of the antrum, and is thus relieved from the pressure of its walls, it grows with great rapidity, and where it can be felt under the skin is perceived to be soft and elastic. Its early protrusion into the nasal cavity and orbit is especially characteristic of its malignancy. It implicated the integuments of the cheek with an inflammatory edema, and the soft structures within the mouth, and throws out fungating masses in these several situations.

3. A point of very great importance in relation to operative interference is to determine the primary seat of the tumor, whether it springs from the cavity of the antrum, from the malar bone, or from behind the superior maxilla in the pterygo-maxillary fossæ. When it springs from the interior of the antrum, the buccal, orbital, nasal, or palatal walls of the cavity are expanded, and the line of teeth is rendered irregular. When the tumor primarily springs from the malar bone it pushes forward the cheek into a somewhat conical prominence, and dips down into the mouth between the gums and the soft structure of the face. It does not involve the palate or alter the line of the teeth, but rather spreads over the bones, and involves the soft parts by continuity of tissue, without any definite anatomical disposition. As the tumor increases in size, it will involve the anterior wall of the antrum, and project into that cavity. When the disease develops primarily behind the superior maxilla, between it and the great wing or the pterygoid process of the sphenoid the upper jaw bone is simply pushed bodily forward, there being little, if any, deformity in its out-