Understanding your Pathology Report: Squamous Cell Carcinoma

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Sometimes, pathology results appear in your patient portal before your doctor has had a chance to review them with you. Reading a report with foreign medical terminology can feel overwhelming. Although pathology reports may look different depending on the hospital or laboratory of treatment, they all contain a few key sections. We will review these sections, and what they mean in the discussion below:

Final Diagnosis: This is the official result of your biopsy.

- **Actinic keratoses/damage (AK):** This is not a diagnosis of skin cancer. These are pre-cancerous lesions caused by chronic sun exposure (1). The atypical cells involve only part of the epidermis, or only part of the topmost layer of the skin (1). About 10% of these pre-cancers will turn into a squamous cell carcinoma if left untreated (2). As this disease is superficial, treatments are often non-surgical and include prescription chemotherapy creams (5-Fluorouracil), cryotherapy (liquid nitrogen spray) or laser spot treatments (1).
- **Squamous cell carcinoma in-situ (SCCis)**: This is a diagnosis of skin cancer that involves the full thickness of the epidermis (top layer of the skin) but has not spread beyond the epidermis into deeper layers (3). Treatments for SCCis are also topical chemotherapy creams and cryotherapy, as well as minor procedures like electrodessication & curettage (ED&C) (3). Mohs surgery is NOT routinely performed for SCCis, but may be done under certain circumstances.
- **Invasive Squamous Cell Carcinoma (iSCC):** This is a diagnosis of skin cancer with the deepest layer of skin invasion. In iSCC, cancerous cells invade beyond the epidermis, into the dermis or beyond. Because the dermis contains blood vessels and lymph vessels, iSCC has a greater potential to spread. In some cases, it may extend into fat, muscle or lymph nodes. For this reason, treatments are mainly surgical. Mohs surgery or complete excision with wide margins are the two gold-standard approaches that ensure that the entire cancer is removed and no residual disease is left behind. Radiation therapy may also be implemented (4). In most cases, iSCC is very treatable with the 10-year survival after surgery exceeding 90% (4).

Risk Factors: For patients with iSCC, the pathologist will provide additional information about what they see under the microscope

- **Differentiation** – describes how different your cells appear from normal cells (5). Well-differentiated tumor cells look more like healthy cells, and are generally lower

risk, whereas poorly differentiated tumor cells appear very different from healthy cells (they have lost some of their normal cell structures) and are considered higher risk (5). Moderately differentiated is an in-between classification (5).

- **Perineural invasion** – describes whether the cancer has invaded nearby nerves.

Clinical History: In this section of the report, your doctor will write a note that contextualizes your tumor for the pathologist. They may describe the size, location and a brief history of the lesion.

Gross Description: In this section of the report, the pathologist explains how the tissue sample looked when it arrived at the pathology lab, ie, how many pieces of tissue they received, the size, etc. This helps the pathologist keep track of which tissue has already been read and processed.

References

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