Merkel cell carcinoma is a rare form of skin cancer, which usually appears as a painless bump on sun-exposed skin in white people over age 50.

**What is a Merkel Cell?**
Normal Merkel cells are found in the top layer of the skin and are thought to be involved in touch sensation. Merkel cell carcinoma is also known as ‘neuroendocrine carcinoma of the skin’. It develops when Merkel cells grow out of control.

**What causes Merkel Cell Carcinoma?**
The exact cause of Merkel cell carcinoma is not known. Exposure to a lot of sunlight over a lifetime and a weakened immune system may play a role. The immune system may be affected by infection (such as HIV), a different cancer (such as leukemia or lymphoma), or drugs that make the immune system less active (such as after an organ transplant). It has recently been shown that a new virus (Merkel cell polyoma virus) may also play a role in the cause of Merkel cell carcinoma.

**How is it Diagnosed?**
Merkel cell carcinoma usually appears as a painless bump on the skin that may vary in size from less than a quarter inch to larger than 2 inches. It is frequently red, pink, or blue in color, but may also develop as a lump under the skin without any color changes. Most Merkel cell carcinomas are located in sun-exposed areas of the body such as the head, neck, arms, or legs, but may occur anywhere on the skin. It is most commonly seen in white people over age 50.
The tumor is at first often mistaken for a different skin condition, such as a cyst, fatty tumor (lipoma), or basal cell skin cancer. To diagnose Merkel cell carcinoma, the doctor removes a sample of tissue (biopsy), which is studied under the microscope by a skin pathologist. The doctor does a full-body skin exam and checks the lymph nodes for signs of swelling. A specific blood test is not yet available. The doctor may order a chest x-ray or in some cases a CT (CAT) scan if there is a suspicion that the cancer may have spread to other parts of the body.

**How is it Treated?**

Merkel cell carcinoma can be completely cured if it is discovered and treated at an early stage. In some cases, the tumor can grow rapidly, spread to other parts of the body and lead to life-threatening disease. Merkel cell carcinoma usually spreads first to a lymph node. Later, it may spread to skin elsewhere on the body, or to internal organs such as the lung, brain, bone, or liver.

The main form of treatment for Merkel cell carcinoma is surgery. The tumor is removed by the surgeon with a border of healthy skin (wide local excision). In most cases, a sentinel lymph node biopsy is performed at the time of the surgery. The sentinel lymph node is the first lymph node the cancer is likely to spread to. It is found by injecting a radioactive substance or dye near the tumor, which flows through the lymph vessels to the nearest lymph node. The sentinel lymph node is removed and examined under the microscope by a pathologist. If cancer cells are found in the sentinel lymph node, the remaining lymph nodes in the area (such as the neck, armpit, or groin), are surgically removed during a second operation (lymph node dissection), or treated with radiation therapy.
Following surgery, radiation therapy may be given at the site of the surgery on the skin and/or the nearby lymph nodes. Occasionally, when surgery is not possible, radiation therapy may be used as the only form of treatment.

Chemotherapy is used to treat Merkel cell carcinoma after it has spread (metastasized) beyond the lymph nodes to other parts of the body when surgery and radiation therapy are no longer effective. The disease may at first respond well to chemotherapy, but usually cannot be cured with this form of treatment.