UAMS myeloma institute

Information on SMOLDERING MYELOMA

What is Smoldering Myeloma?

Smoldering multiple myeloma (SMM) is a precancerous form of myeloma, a cancer of plasma cells in the bone marrow. SMM is characterized by the presence in the blood of an abnormal protein produced by plasma cells and the presence of free light chains in the blood or urine.

The abnormal protein is referred to as an M–protein or paraprotein. It is monoclonal, which means that it is produced by one family of cells that are all identical copies of each other.

Plasma cells, found in the bone marrow and in blood, normally produce antibodies that fight infection.

Key Statistics and Risk Factors

SMM accounts for approximately 15% of all cases of newly diagnosed myeloma. Like myeloma, SMM is more common in men than in women and is nearly twice as common in African-Americans as in Caucasians.

There is no known cause for SMM. The amounts of abnormal plasma cells and paraprotein in the bone marrow have been identified as risk factors for progression of SMM to active myeloma.

Signs and Symptoms

SMM is sometimes called asymptomatic myeloma, because patients do not usually experience any symptoms. Occasionally, patients have numbness or tingling in their hands and feet or problems with their balance. This may be due to damage to nerves caused by the paraprotein in the blood.

Unlike patients with myeloma, patients with SMM do not have high levels of calcium, poor kidney function or low blood cell counts, and x-rays of the bones and PET scans are normal.

Patients with SMM should watch for any symptoms, such as bone pain and fatigue, as they might indicate progression to myeloma.

Diagnosing Smoldering Myeloma

SMM is usually detected incidentally during a routine check-up when there are increased levels of paraprotein and/or free light chains in the blood and/or urine. The diagnosis is then confirmed by having further blood tests and a bone marrow biopsy.

SMM is clinically defined by a paraprotein level greater than 30 grams per deciliter, more than 10% plasma cells in the bone marrow and no myeloma-related organ or tissue impairment. Patients who have higher concentrations of paraprotein and/or free light chains in the blood and/or the urine will usually have further testing, such as imaging studies of the skeleton.

The Myeloma Institute has classified two types of SMM. Low Risk SMM is generally benign, but it needs to be closely monitored as it can progress to myeloma. High Risk SMM usually progresses to myeloma in approximately 12 to 18 months after diagnosis.

The risk type of SMM is determined by molecular diagnostic testing that is performed on the patient's bone marrow samples.

Treatment

Many patients with Low Risk SMM do not need treatment, but need to be followed closely by their physician. High Risk SMM patients can benefit from treatment to slow the progression to active myeloma. Physicians and scientists at the Myeloma Institute are investigating treatments employing steroids and drugs that work with the immune system (known as immunomodulatory and monoclonal antibodies) to assess their potential effectiveness in the treatment of High Risk SMM, and ultimately to develop curative therapies.

Patients with SMM should have blood work every two to three months after initial diagnosis. It is important for patients to contact their doctor between check-ups if they develop any new symptoms.

Prognosis

While not all SMM patients develop active MM, many do. Data shows that approximately 10% of SMM patients progress to active myeloma every year in the first five years, 3% per year in years 6-10, and 1% per year thereafter. Newly developed symptoms such as pain, fatigue, or weight loss can be signs that the disease has progressed.

Prognosis

At the Myeloma Institute, our understanding of the molecular and genetic processes underlying SMM and myeloma continues to expand. This knowledge guides our ability to tailor treatment strategies that can delay progression to active myeloma or even cure patients at the precancerous stage.

This information about SMM and other patient education materials are available at **www.myeloma.uams.edu**