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## **Multiple Myeloma Basics: An interview with Dr Sundar Jagannath**

By Katie Charles, THE DAILY CHECKUP, Wednesday, November 24th 2010

Sundar Jagannath, MD, Director of the Multiple Myeloma Program at the Mount Sinai Medical Center in New York City.

As director of the multiple myeloma program at Mount Sinai, Dr. Sundar Jagannath specializes in blood cancer treatment, including stem cell and bone marrow transplant. A 20-year veteran of the field, Jagannath oversees the care of 600 to 700 myeloma patients a year.

### **Who's at risk**

While most Americans are familiar with leukemia, its sister blood cancers, such as multiple myeloma, remain relatively uncommon and unknown.

"Multiple myeloma is a cancer of the plasma cell, one of the white blood cells that is responsible for making antibodies," says Jagannath. "Plasma cells reside in the bone marrow, so people can identify myeloma as a blood or bone marrow cancer." About 19,000 cases of myeloma are diagnosed a year (2,100 per year in Canada) and approximately 69,000 Americans (6,000 – 7,000 Canadians) are living with the disease.

The incidence of multiple myeloma is fairly low, though it is rising as myeloma patients live longer and longer.

"The incidence is 4 per 100,000 in Caucasians, and twice as many, 8 per 100,000 in African-Americans," says Jagannath. Hispanic and Asian groups are at lower risk than Americans of European or African descent.

Doctors are still investigating what causes multiple myeloma. "There is no specific risk factor that has been identified," says Jagannath. "Though there are possible associations — for instance, exposure to radiation or chemicals may put you at higher risk." Myeloma is slightly more common in men than women, and most people are diagnosed in their 60s or 70s. "Half the people diagnosed are over the age of 70," says Jagannath. Patients under 40 years account for less than 1% of myeloma cases.

### **Signs and symptoms**

Diagnosing myeloma has changed over the years, with more and more cases being caught in the early stages before symptoms appear, when precancerous conditions have not yet developed into myeloma.

"Some patients present with full-blown multiple myeloma, which we call de novo cases," says Jagannath. "In contrast, smoldering myeloma is asymptomatic and precancerous — many of these patients go on to develop full multiple myeloma over several years."

Thanks to routine blood screening, doctors now catch 30% of myeloma cases while they are still asymptomatic.

"Myeloma patients often have anemia and an elevated protein level," says Jagannath, "When this result comes back from the routine screening, that triggers the doctor to do additional testing that can catch myeloma before the patient is actually symptomatic."

Some patients test high for antibody proteins without having myeloma, and doctors describe this condition as Monoclonal Gammopathy of Undetermined Significance (MGUS). While MGUS doesn't necessarily turn into cancer, it is associated with a 1% chance per year of developing into myeloma, so doctors keep a close watch on these patients.

The classic symptom of myeloma is bone pain, especially pain in the back or rib cage. "As it grows in the bone marrow, myeloma weakens the bone to the point where coughing or sneezing can cause a rib fracture," says Jagannath.

Doctors use the acronym CRAB to cover major symptoms. C is for high calcium (hypercalcemia), as excess calcium enters the blood from damaged bones. R is for renal failure, which occurs as the excess protein clogs the kidneys. A is for anemia, as the red blood cell count drops as cancer takes up more of the bone marrow. B is for bone lesions and bone pain.

Other common symptoms are increased fatigue, anemia, osteoporosis at a young age and an impaired immune system — which can lead some patients to catch pneumonia twice in a year.

### **Traditional treatment**

The options for treating multiple myeloma have improved dramatically in the past decade, and some patients don't need any treatment at all.

"For patients with asymptomatic or smoldering myeloma, there's often no rush to start treatment," says Jagannath. "However, we do need to watch them carefully." One reason not to rush treatment is that so many new drugs are in the development stage (pipeline), that the future treatment looks brighter.

Chemotherapy, medical treatment, stem cell transplant and radiation therapy are all treatment options for some myeloma patients. "While it is still not considered a curable cancer, cumulatively all these new drugs have helped improve life expectancy," says the doctor.

Building on drugs that were introduced in the 1960s, doctors have been using melphalan (or Alkeran) and cyclophosphamide as effective chemotherapy agents, along with corticosteroids like prednisone.

The newest generation of drugs attacks myeloma in new ways. "In the past 15 years, we've made big strides," says Jagannath.

"The new drugs include the sleeping pill thalidomide, which has a dramatic impact as an immuno-modulatory drug; Velcade, which inhibits the enzyme proteasome that is important for survival of plasma cells; and lenalidomide, an even more potent immuno-modulatory drug for killing cancer cells."

About 15% of patients are not well-served by these drugs, and doctors are looking for better ways to treat them.

### **Research breakthroughs**

With the barrage of new drugs, myeloma patients today have much better odds for fighting the disease.

A third of patients now live longer than 10 years; 40 years ago, the life expectancy was one year.

### **Questions for your doctor**

A good question to start with is, "How are my bone strength and kidney function?" If the doctor is prescribing medication, ask "What are the choices of drugs?" and "Are you considering the latest generation of drugs?"

Be sure to talk about potential side effects, and don't withhold symptoms out of fear that your doctor will take you off the drug.

"If you feel tingling in your hands and feet, tell your doctor so he or she can tailor the dose," says Jagannath.

### **What you can do**

Care for your bone health.

For strong bones, quit smoking, get exercise and take calcium and vitamin D.

Get informed.

Comply with medications and know their side effects.

Some of the most effective myeloma drugs (thalidomide and lenalidomide) can cause blood clots, so you need to be vigilant about taking aspirin. Talk to your doctor about how to prevent infection or blood clots when you fly.

Patient organizations like Myeloma Canada ([myeloma.ca](http://myeloma.ca)) and the International Myeloma Foundation ([myeloma.org](http://myeloma.org)) have information on how to find the best care and other resources like support groups.