



# What Is Multiple Myeloma? An Expert Explains

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## Jack Aiello:

Dr. Orlowski, can you explain a little bit about what is myeloma and the symptoms of it?

## Dr. Orlowski:

Multiple myeloma is a cancer of a cell, which is often found in the bone marrow, called a plasma cell. And it normally does a very important job, which is to help fight off infection.

But every now and then, one of these plasma cells becomes abnormal, and over, usually quite a long period of time, sometimes years, there are more and more of these cells in the bone marrow. And that's when you can start having problems.

The most common symptoms are, unfortunately, bone pain. Because one of the effects of this is that as these cells grow in the bone, if you will to make more room for themselves, they cause your bone to become a little bit weakened and hollowed out. Sometimes you can have a fracture in those areas, like in a rib or in a vertebrae, and that can cause pain.

Sometimes patients can have pain even without a fracture, but that's a very common symptom. Fatigue or shortness of breath because of anemia can be very common, and that's because you're making fewer red blood cells because if you've got myeloma in the bone marrow, which is where the normal blood cells are being made, the normal cells have less room to grow. They don't get all of the food in the bone marrow that they should be.

You can also have other problems like kidney damage, and that's because of oftentimes the protein that the myeloma cells are making, which is variously called the M protein, or M spike, or monoclonal protein, or light chain, if there's a very high level of it, sometimes that can damage the kidneys. And also you can have high levels of calcium because if the bones are being dissolved, they're mostly calcium, and that has to go somewhere, which is usually into the blood. And then infections are not uncommon because any cancer, but myeloma in particular, can make the immune system weaker, and you're more likely to get various kinds of infections.

There still are about one out of five people who are diagnosed with myeloma, though, who are asymptomatic at the time that they're diagnosed. And usually they're detected because of a routine physical examination, for example, or a routine laboratory study, or a routine X-ray that shows some kind of abnormality. So you can be asymptomatic. In terms of diagnosis, the way that we pick it up is a combination of blood tests, looking for things like blood counts and kidney function.

And for this abnormal protein, that most people who have myeloma will have in either their blood or their urine, X-rays are important looking for whether there are areas of the bone which are being dissolved that are called lytic lesions. And also a bone marrow aspirate and biopsy is important, because that's where the myeloma cells are usually found.

And if you have at least 10 percent of those cells present in the bone marrow, then you have a diagnosis of myeloma. Although, as we'll probably get to later, that doesn't automatically mean that you need to get chemotherapy for it. In some cases, other tests may be helpful like an MRI, or magnetic resonance imaging.

Sometimes a PET scan can be helpful, which also stands positron emission tomography scan. And occasionally, we do other kinds of biopsies like skin biopsies or fat pad biopsies. Sometimes people have what's called a plasmacytoma, which is a big mass of myeloma cells outside of the bone marrow. And a biopsy of that mass may be important. But those will be the most common ways that people present and the ways that we usually diagnose it.

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