

| Effects of Increased Myeloma Cells in the Bone Marrow | Cause | Impact on Patient |
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| CRAB criteria | | |
| C - Increase in blood calcium | Release of calcium from damaged bone into bloodstream. | <ul style="list-style-type: none"> •Mental confusion •Dehydration •Constipation •Fatigue •Weakness •Renal or kidney damage |
| R - Renal problems in kidney damage | Abnormal monoclonal proteins produced by the myeloma cells are released into the bloodstream and can pass into the urine and produce kidney damage. High blood calcium, infections, and other factors can also cause or increase the severity of kidney damage. | <ul style="list-style-type: none"> •Sluggish circulation •Fatigue •Mental confusion |
| A - Anemia | Decrease in the number and activity of red blood cell-producing cells in the bone marrow. | <ul style="list-style-type: none"> •Fatigue •Weakness |
| B - Bone Damage Thinning (osteoporosis) or Areas of more severe damage (called lytic lesions), fracture, or collapse of a vertebra | The myeloma cells activate osteoclast cells, which destroy bone, and block osteoblast cells, which normally repair damaged bone. | <ul style="list-style-type: none"> •Bone pain •Bone swelling •Fracture or collapse of a bone •Nerve or spinal cord damage |
| Additional types of organ dysfunction | Local or systemic effects of myeloma, other than CRAB features. | <ul style="list-style-type: none"> •Neuropathy •Recurrent infections •Bleeding problems •Other individual problems |
| Abnormal immune function | The myeloma cells reduce the number and activity of normal plasma cells capable of producing antibodies against infection. | <ul style="list-style-type: none"> •Susceptibility to infection •Delayed recovery from infection |