MULTIPLE MYELOMA

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The bar for what constitutes good news about multiple myeloma is low. Physicians and researchers who study this deadly cancer of blood plasma cells can point to a doubling of the average survival time over the past decade or so. But make no mistake, a diagnosis of multiple myeloma is still horrible news: patients can expect to live a mere 7–8 years, during which time they'll probably find themselves hobbled as the disease damages their bones. The new classes of drugs that have extended life expectancy will inevitably lose their power as resistance develops, leaving only the option of an autologous stem-cell transplant — an arduous procedure that introduces risks of its own.

Yet through the lens of this rare form of cancer, researchers are gaining important insights into many other diseases. The progression of myeloma from a benign precursor state known as MGUS to the deadly malignancy depends on a complex of factors that are not yet fully understood. But it is clear that myeloma, with its epicentre in the bone marrow, depends strongly on the composition and behaviour of the cells and tissues around it. Studying this relationship has helped researchers learn more about the role of the tumour microenvironment in many other cancers. Similarly, multiple myeloma has provided an ideal opportunity to investigate the theory that the origin of malignancy lies in cancer stem cells that continue to produce new cancer cells even as drugs kill the old ones. And efforts to protect bones from the ravages of multiple myeloma have helped further the development of drugs that can serve those suffering from non-malignant bone disorders such as osteoporosis. Drugs and surgical techniques developed initially for multiple myeloma have revolutionized the way doctors treat other bone diseases.

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Herb Brody
Supplements Editor

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