

Bone Marrow transplantation: Donation and Donor stem cells

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Abstract

Bone marrow may be a semi-solid tissue found within the spongy or cancellous portions of bones. In birds and mammals, bone marrow is that the primary site of latest blood corpuscle production or haematopoiesis. It's composed of hematopoietic cells, marrow fat, and supportive stromal cells. In adult humans, bone marrow is primarily located within the ribs, vertebrae, sternum, and bones of the pelvis. Bone marrow comprises approximately 5% of total body mass in healthy adult humans, such a person weighing 73 kg (161 lbs) will have around 3.65 kg (8 lbs) of bone marrow.

Introduction

Human marrow produces approximately 500 billion blood cells per day, which join the circulation via permeable vasculature sinusoids within the medullary cavity. all kinds of hematopoietic cells, including both myeloid and lymphoid lineages, are created in bone marrow; however, lymphoid cells must migrate to other lymphoid organs (e.g. thymus) so as to finish maturation.

Bone marrow transplants are often conducted to treat severe diseases of the bone marrow, including certain sorts of cancer like leukemia. Several sorts of stem cells are associated with bone marrow. Hematopoietic stem cells within the bone marrow can produce to hematopoietic lineage cells, and mesenchymal stem cells, which may be