

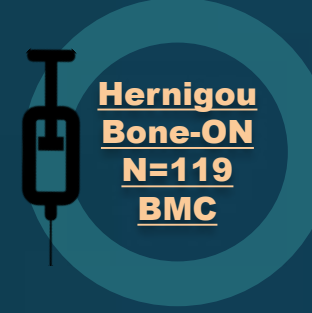
Orthopedic Stem Cell Research Summary-All Cell Types (1997-2017)

1997



This is an update to my annual bone marrow stem cell research summary that **now includes all cell types**. These are being added due to the additional publishing in orthopedic stem cell use outside of bone marrow that took place between 2015-2017. Here I list all significant publications from the late 90s through April 2017.

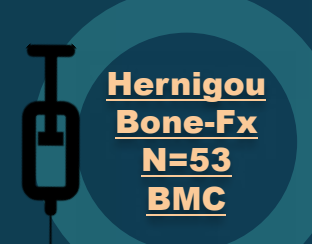
2000



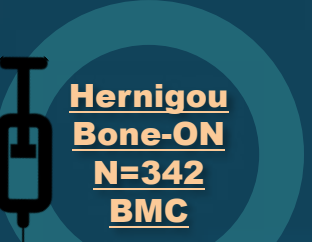
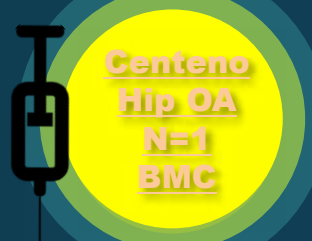
The list was compiled by running various searches on body parts and bone marrow cell types on PubMed. Each circle represents a bone marrow stem cell research study and is hyperlinked to the abstract in the U.S. National Library of Medicine or the full text article. Adipose stem cell studies are denoted by a square and birth tissues stem cells by a triangle. The main author is listed, the area of treatment, the number of patients involved, and the type of stem cells used (either Autologous Bone Marrow Concentrate (BMC), Cultured Mesenchymal Stem Cells (Cult MSC) [autologous or allogeneic], Stromal Vascular Fraction (SVF), Cultured Adipose Stem Cells (ASC Cult), or Umbilical Cord Stem Cells (UCB). The scalpel or injection icons represent the three types of delivery techniques: injection, surgical, or both. Centeno-Schultz publications are highlighted.

n=10,018

2005

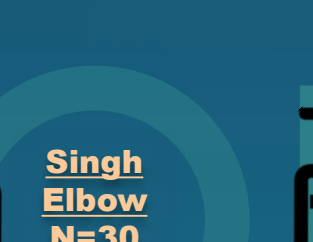
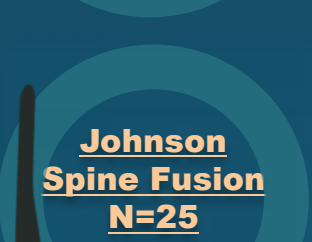
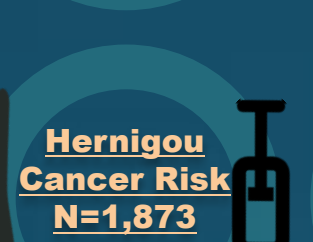
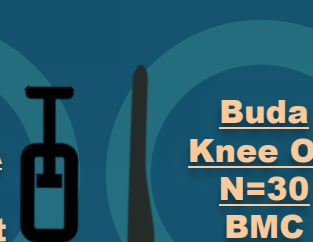
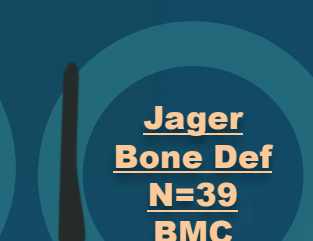
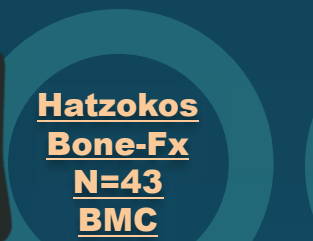


(The patient n is approximate as a few studies list joints instead of patients. On the other hand, several later case studies and small case series were also excluded due to significance. In addition, this number represents total publishing activity as patients from prior studies are likely repeated by later studies.)

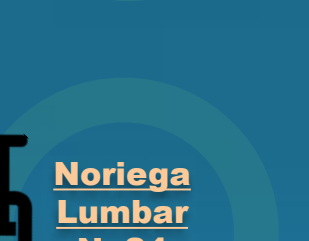
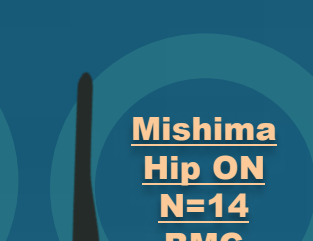
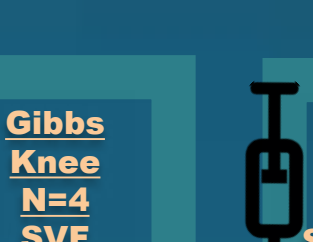
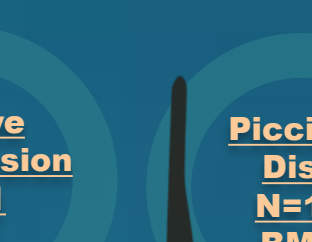
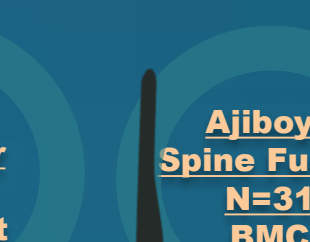
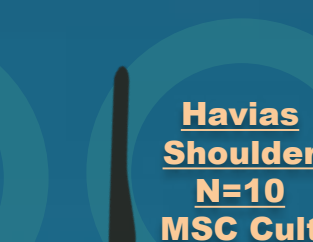
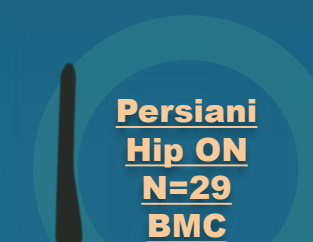
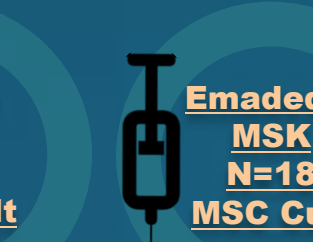
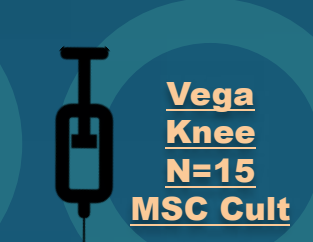
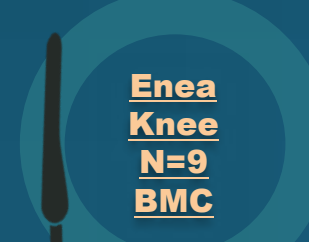


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2010



2015



2017

