

# Orthopedic Bone Marrow Stem Cell Research Summary (1997-2019)

1997



Some physicians and scientists argue that we don't have much research supporting the use of bone marrow stem cells to treat orthopedic conditions. Here I list all significant publications from the late 90s through summer 2018. The list was compiled by running various searches on body parts and bone marrow cell types on PubMed. Each circle represents a research study and is hyperlinked to the abstract in the U.S. National Library of Medicine or the full text article. The main author is listed, the area of treatment, the number of patients involved, and the type of bone marrow stem cells used (either Autologous Bone Marrow Concentrate (BMC) or Cultured Mesenchymal Stem Cells (Cult MSC) [autologous or allogeneic]). The scalpel or injection icons represent the three types of delivery techniques: injection, surgical, or both. Regenexx publications are highlighted. Case series smaller than 5 patients, unless publishing on original concepts were excluded.

2000



n=11,467

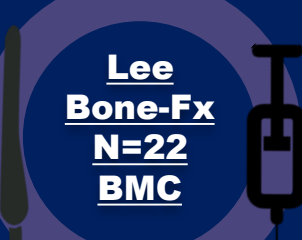
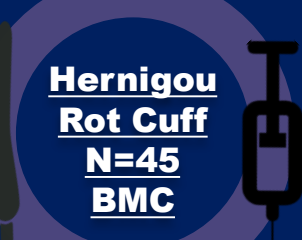
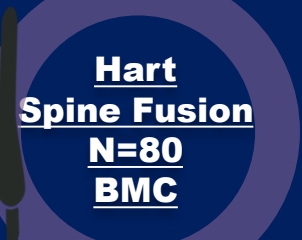
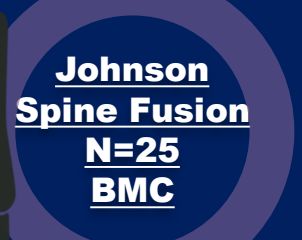
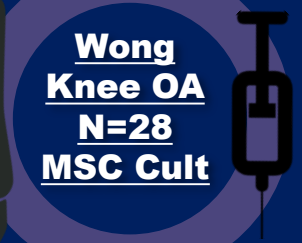
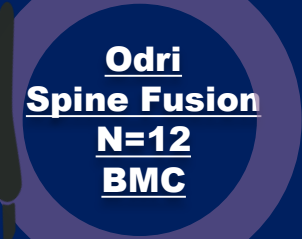
2005



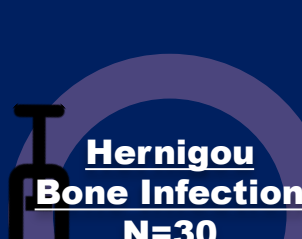
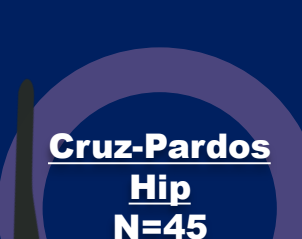
(The patient n is approximate as a few studies list joints instead of patients. On the other hand, several later case studies and small case series were also excluded due to significance. In addition, this number represents total publishing activity as patients from prior studies are likely repeated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



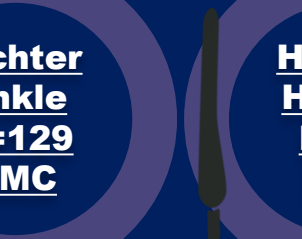
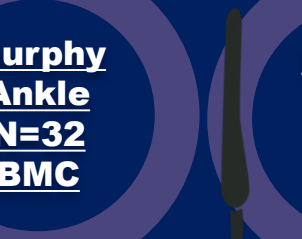
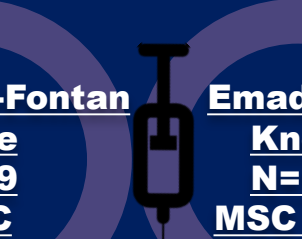
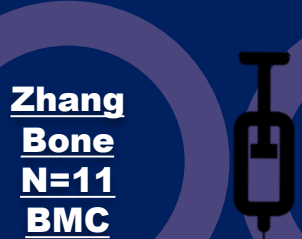
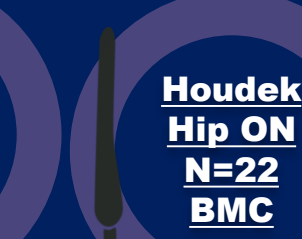
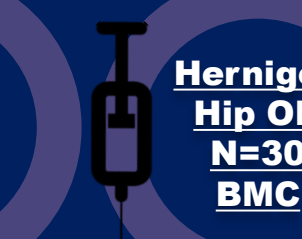
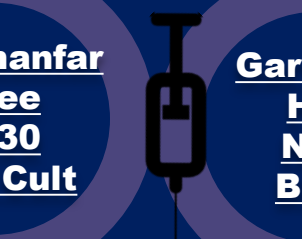
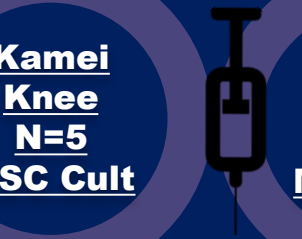
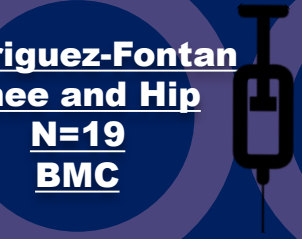
2010



2015



2018



2019

