神戸大学整形外科×そばじまクリニック　共著論文一覧
（一部抜粋）

Comparison of short-term clinical outcomes of intra-articular injection of micro-fragmented adipose tissue and stromal vascular fraction cells for knee osteoarthritis treatment: A retrospective single-center cohort study

【抄訳】 Takuma Maeda et al.Regen Ther.2025.

This study compared SVF and MFAT for knee osteoarthritis. Both improved pain, function, and cartilage quality, but MFAT showed better flexion gains and more sustained benefits over time. SVF effects declined, while MFAT maintained improvement and superior T2-mapping results. No serious adverse events occurred.

SVFとMFATを比較した結果、両者は痛みと機能を改善したが、MFATは屈曲改善と効果の持続性、軟骨質改善で優れていた。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC11932757/

Human uncultured adipose-derived stromal vascular fraction shows therapeutic potential against osteoarthritis in immunodeficient rats via direct effects of transplanted M2 macrophages

【抄訳】 Yuma Onoi et al.Stem Cell Res Ther.2024.

SVF slowed osteoarthritis progression and reduced synovitis in a rat model, outperforming ADSCs. Its M2 macrophages enhanced growth factors, anti-inflammatory cytokines, and cartilage protection. SVF uniquely integrated into synovial tissue and improved joint homeostasis, indicating distinct and superior therapeutic mechanisms compared with ADSCs.

SVFはOAモデルで炎症と進行を抑え、軟骨保護作用を示した。特にM2マクロファージが成長因子や抗炎症性サイトカインを増やし、ADSC単独より優れた治療効果を示した。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC11438128/

Clinical and Radiological Comparison of Single and Double Intra-articular Injection of Adipose-Derived Stromal Vascular Fraction for Knee Osteoarthritis

【抄訳】 Masahiro Fujita et al. Cell Transplant.2023.

This study compared single versus double SVF injections for varus knee OA. Both improved WOMAC and T2 mapping, but double injections showed greater benefits, especially in severe varus alignment. Findings suggest double dosing may yield more favorable long-term outcomes.

膝OAへのSVF単回と2回注射を比較した結果、重度の内反膝では2回注射がより良好な改善を示し、両群でT2マッピングも改善した。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC10411282/

Paracrine effect of the stromal vascular fraction containing M2 macrophages on human chondrocytes through the Smad2/3 signaling pathway

【抄訳】 Masahiro Fujita et al. J Cell Physiol.2022.

SVF, containing anti-inflammatory macrophages, enhances chondrocyte regeneration by increasing collagen II, TIMP-3, and TGF-β while activating the TGF-β/Smad2/3 pathway. This paracrine activity reduces catabolic markers and supports cartilage-protective effects more effectively than ADSCs.

SVFは抗炎症性マクロファージを含み、TGF-β/Smad2/3経路を介して軟骨細胞のコラーゲン産生と保護因子を増やし、再生を促進することが示された。

原著はこちら→https://pubmed.ncbi.nlm.nih.gov/35766589/

Comparison of Clinical and Imaging Outcomes of Different Doses of Adipose-Derived Stromal Vascular Fraction Cell Treatment for Knee Osteoarthritis

【抄訳】 Masanori Tsubosaka et al. Cell Transplant.2021.

TThis study compared low- and high-dose SVF injections for knee osteoarthritis. Both doses improved MRI findings similarly, but the high-dose group showed greater clinical improvement, with better KOOS pain and symptom scores at 12 months. Higher SVF doses may therefore offer stronger symptomatic benefits for knee OA.

膝OAにSVFを低用量・高用量で比較したところ、両群で画像所見は改善したが、高用量群の方が痛み・症状の改善が大きく、より良好な臨床効果が示された。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC9003644/

Attenuation of Knee Osteoarthritis Progression in Mice through Polarization of M2 Macrophages by Intra-Articular Transplantation of Non-Cultured Human Adipose-Derived Regenerative Cells

【抄訳】 Kohei Kamada et al. J Clin Med. 2021.

Human ADRC transplantation reduced osteoarthritis progression in mice, decreasing catabolic and inflammatory markers while increasing collagen II and M2 macrophages. ADRCs also induced macrophage polarization toward an anti-inflammatory M2 phenotype in vitro. These findings suggest ADRCs protect cartilage and modulate inflammation, helping slow OA progression.

ADRC移植はマウス膝OAの進行を抑え、軟骨の破壊因子を減少させ、マクロファージをM2へ誘導することで抗炎症・軟骨保護作用を示した。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC8509129/

The influence of adipose-derived stromal vascular fraction cells on the treatment of knee osteoarthritis

【抄訳】 Masanori Tsubosaka et al. BMC Musculoskelet Disord. 2020.

IThis study evaluated the short-term effects of intra-articular SVF cell injection in 57 patients with knee osteoarthritis. Significant improvements were observed in knee extension, pain (VAS), function (WOMAC, KOOS), and overall clinical scores from 1 to 12 months. Radiographic alignment did not change, but T2-mapping values of the lateral femur and tibia improved at 12 months. Overall, SVF injection demonstrated excellent short-term clinical benefits as a promising therapeutic option for knee OA.

膝OA患者にSVFを関節内投与したところ、1〜12か月で痛み・機能が大幅に改善し、T2マッピングも向上した。短期成績は良好で、有望な治療法と示された。

原著はこちら→https://pmc.ncbi.nlm.nih.gov/articles/PMC7137313/