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Japan develops breakthrough treatment for osteoarthritis

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Pluripotent cells grown from discard-worthy tissue by Edogawa hospital



A break through feat of growing pluripotency expressing cells from osteoarthritis (OA) affected cartilage tissue of knee joints of elderly has been reported by orthopedicians and cell culture experts led by Dr Shojiro Katoh, President, Edogawa Hospital.

OA affects, knee joints of millions globally and those with severe disease, undergo Total Knee Arthroplasty (TKA), in which damaged cartilage is replaced with artificial knee prosthesis.

Dr Katoh, during TKA surgery, took portions of the damaged tissue, which otherwise is discarded, isolated chondrocyte cells in tissue engineering lab, and could culture them as fully reorganized healthy cartilage tissue, expressing biomarkers relevant to pluripotency.

This technology has a potential to solve cartilage damage of approximately 12 million people annually worldwide.

"This could probably be the world's first report of Osteoarthritis tissue, yielding cells expressing pluripotency markers," said Dr. Katoh, citing their publication in Regenerative Therapy Journal.

Image caption- Dr. Shojiro Katoh, President, Edogawa Hospital, Tokyo, Japan