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Pre-SVF arthroscopy: A case report of new concept of meniscus and cartilage regeneration using arthroscopy followed by intra-articular injection of adipose-derived stromal vascular fraction

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As we have seen, multiple studies related to the utilization of SVF for treating osteoarthritis for elderly patient who underwent various conservative treatments with no success, which showed encouraging results of regeneration of articular cartilage and meniscus. We have not seen any dedicated study for younger patients, active patients and elderly proactive patients that suffer from symptomatic advanced meniscus tear and/or loose bodies within the knee joint. These patients that have absolute indication for arthroscopy procedure usually undergo the standard partial or total meniscectomy procedure, this standard meniscectomy procedure have questionable outcomes and may increase the risk of early onset osteoarthritis as shown in various studies. The Pre-SVF arthroscopy concept is a technique that aim to treat the patients mechanical symptoms caused by symptomatic advanced meniscus tear and/or loose bodies (which is very doubtful that a solely intra-articular injection of SVF would solve these issues) and maintain the scaffold and the shape of the meniscus (which is not maintain in standard meniscectomy method). Therefore, the SVF injection following this technique of arthroscopy showed a higher regeneration rate of the meniscus, as well as the articular cartilage layer. The advantage of this Pre-SVF arthroscopy technique is to give patients a faster symptoms improvements and higher rate of regeneration of damaged tissue in the knee joint. Data showed significant improvements in pain and activity scales as well as meniscus and articular cartilage regeneration seen in post-treatment MRI images. This pilot study included 3 patients to be performed in large-scale and to be compared with solely SVF injection for similar indications.

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Mesothelin expression in ovarian cancer and its potential as targeted ovarian cancer immunotherapy

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Ovarian cancer is the fourth most common cause of cancer death in women. Most patients are diagnosed at stage III and IV, with resultant low relative-survival rates. The current treatments with conventional cytotoxic chemotherapy and novel surgical techniques have improved the oncologic outcome of this disease. However, recurrence is common. Current evidence suggests that the immune system and its ability to recognize and eliminate the microscopic disease is of significant importance in preventing recurrence. Immunotherapy for ovarian cancer is to balance the activation of the immune system against this cancer while preventing the potential for toxicity elicited by immune modulation. Mesothelin, a glycosylphosphatidylinositol (GPI) anchored cell surface protein, is a potential target for antibody-based ovarian cancer immunotherapy due to its high expression in ovarian cancer. Human monoclonal antibodies targeting mesothelin have been isolated by phage display technology and it provides opportunities for novel ovarian cancer immunotherapy. In addition, CRS-207 is live-attenuated *Listeria monocytogenes* (Lm), which has been genetically modified to be safe for human use while retaining its ability to stimulate an immune response against the protein mesothelin.

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