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## Osteochondral Defect Restoration / Cartilage Restoration



Osteochondral lesions are focal cartilage injuries that involve one side of a joint that can occur from trauma and commonly results in pain and disability. When non-surgical treatments do not provide relief, we are able to offer surgical options to improve your pain and function. The most common location for this injury in the foot and ankle is the talus.

Historically, treatment has focused on removing the damaged cartilage and drilling or microfracturing (putting holes in the bone) in order to allow the blood within the bone to fill the defect and restore the cartilage. This treatment does provide relief in some patients but has limitations when treating moderate to larger defects and has shown to be lose effectiveness over time. This arthroscopic treatment is appropriate, however, with modern advances in medicine we feel that cartilage restoration is the next step in treating these injuries.

Cartilage restoration at our institution involves the use of Biocartilage<sup>®</sup> that is allograft cartilage that we combine with your concentrated stem cells. The stem cells are harvested from you at the same time of the ankle surgery, so there is no extra procedure required for this aspect of your care. When treating osteochondral defects, we do not only focus on the cartilage injury – our goal is to improve the function of your ankle as a whole, therefore, in some cases- the stability of the ankle, tendon problems and spurs may be addressed at the same time. The damaged cartilage is removed and the unhealthy bone is removed so that a healthy bed of bone and a rim of normal cartilage is remaining. The bony defect, if there is one, is filled in with bone graft (either your own from your calcaneal bone or allograft bone) to fill the defect. We

liken this to repairing a pot hole, where you need to fill the large defect before placing the fine top layer of asphalt. After grafting the damaged bone defect, we then place the mixture of your stem cells and Biocartilage® to restore your damaged cartilage, contouring it to your native cartilage and seal this with what is called fibrin – to ensure that the graft stays in place.