



Two Fundamental Strategies of Cartilage Restoration

- Cell based
 - Induce cells to form (chondral) tissue in situ
 - » Marrow stimulation/ MFx plus
 - » (M)ACI
 - » Minced tissue (alive or dead)
- Whole tissue based
 - Restore defect with mature tissue » Osteochondral autograft (OAT)
 - » Osteochondral allograft (OCA)
 - » Processed (acellular) allografts







Indications for Osteochondral Allografts

- Osteochondritis dissecans/OLTTraumatic
- chondral/osteochondral lesionsRevision of previous cartilage
- surgery
- Osteonecrosis/ SONK
- Fracture malunion (tibial plateau)Focal degenerative chondral
- lesions
- Osteoarthritis



Clinical Outcomes Depend on Diagnosis

		Among patients with grafts in situ at latest follow-up		
Diagnosis	OCA failure	Mean IKDC pain	Mean IKDC Function	Satisfaction*
Traumatic chondral injury	2%	3.3	7.3	90%
Osteochondritis dissecans	7%	2.1	8.1	96%
Fracture	15%	4.4	6.1	80%
Degenerative chondral lesion	21%	3.7	6.3	81%
Avascular necrosis	25%	2.7	7.1	92%
Osteoarthritis	39%	3.5	5.8	79%

*responded either "satisfied" or "extremely satisfied"











Postoperative Care

- NO tissue differentiation required
- Fracture fixation/ healing model
- 4-6 weeks 25% WB or WBAT
- ROM as tolerated
- Begin functional rehab at 6 weeks
- RTS as early as 3-4 months







1 (73%) 2 (27%)

Subjective Outcomes

M	Descrit	Latest	Difference	
Measure	Preoperative	Follow Up	(change score)	
IKDC				
Pain	5.5 ± 2.5	2.8 ± 2.4	-2.7 ± 3.3	
Function	3.4 ± 1.8	7.3 ± 2.2	3.9 ± 2.7	
Total	43.7 ± 18.0	75.7 ± 18.8	32.0 ± 24.0	
KOOS				
Symptoms	62.5 ± 18.0	82.0 ± 17.4	19.5 ± 23.5	
Pain	66.5 ± 18.6	85.7 ± 16.6	19.2 ± 20.6	
Activities of daily living	74.5 ± 18.9	91.5 ± 15.0	17.1 ± 19.8	
Sports / recreation	37.8 ± 22.6	70.9 ± 27.3	33.0 ± 34.9	
Quality of life	25.4 ± 17.6	60.0 ± 26.3	34.7 ± 25.0	

 $p{<}0.001$ for change from preoperative to latest follow-up on all measures













