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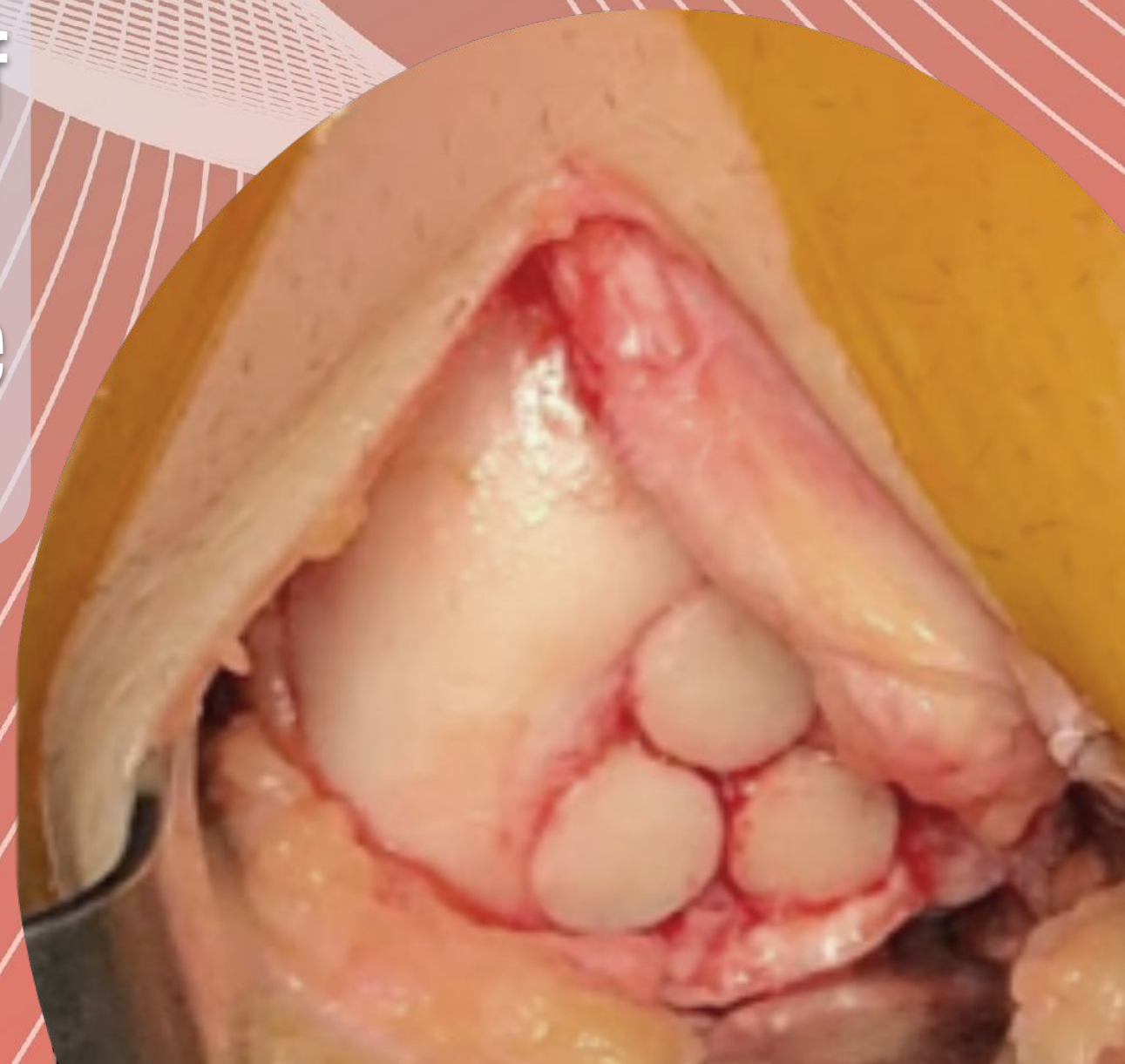
**Boston**  
Massachusetts  
June 18–June 21

 **HOSPITAL ITALIANO**  
de Buenos Aires



# Use of Fresh Frozen Osteochondral Allograft for the Treatment of Cartilage Defects of the Knee. Functional Results and Failure Rate at a Mean Seven-Year Follow-up.

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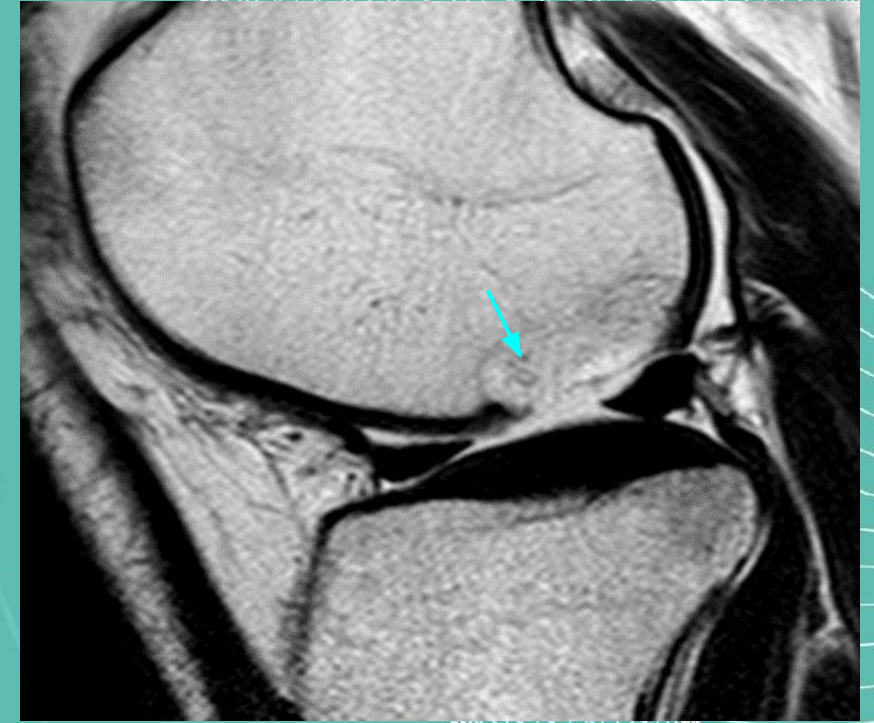
*Disclosures:*

I have no conflict of interest  
or financial disclosure with  
this presentation



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- Knee osteochondral lesions represent a frequent pathology within young active patients.
- One possible indication for severe lesions or in case of impossibility of harvesting an autograft is the use of fresh frozen allograft.
- The objective of this study was to retrospectively analyze functional results and failure rate after osteochondral transplants using fresh frozen allografts.



# Materials and Methods



## INCLUSION

- Patients who underwent knee osteochondral transplant with fresh frozen allografts.
- Between 2014 and 2019.
- At least two-year follow-up.



## EXCLUSION

- Patients who received a total femoral condyle or a total tibial plateau transplant

**Retrospective design**

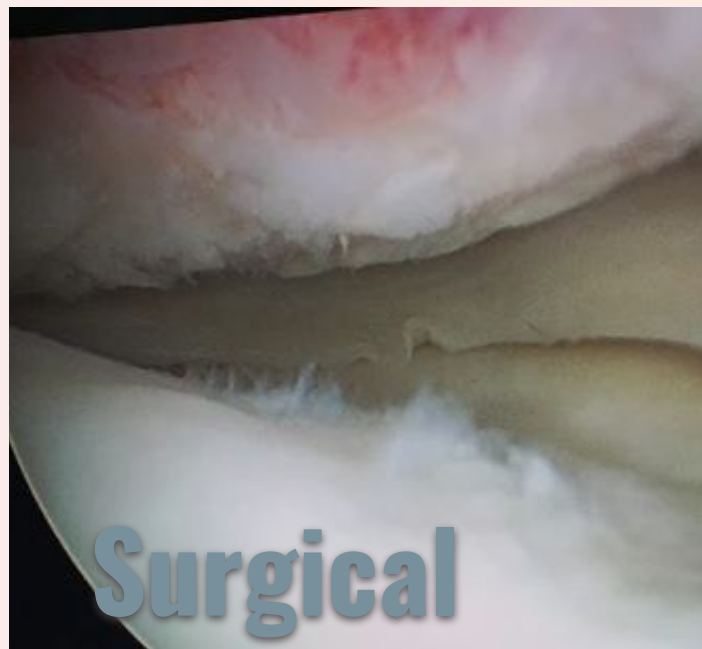
**Analyzed variable**

Demographics  
Size of the defect  
Previous surgeries

**Outcomes**

Functional results (Lysholm IKDC)  
Pain (VAS)  
Failure (conversion to TKA)

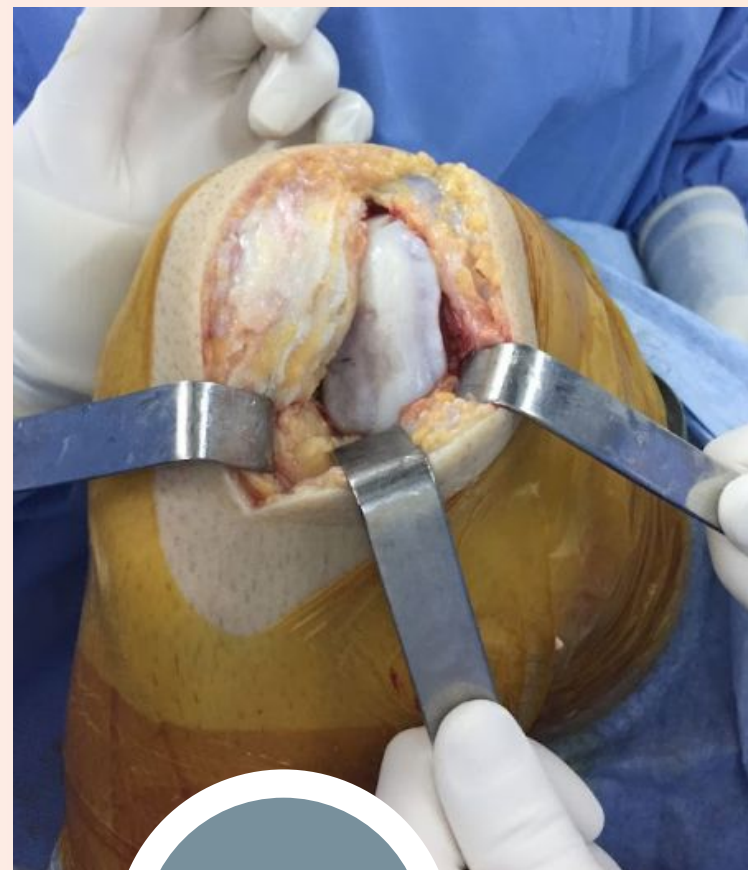




## Surgical Technique

01

A diagnostic arthroscopy is performed for treating other lesions.



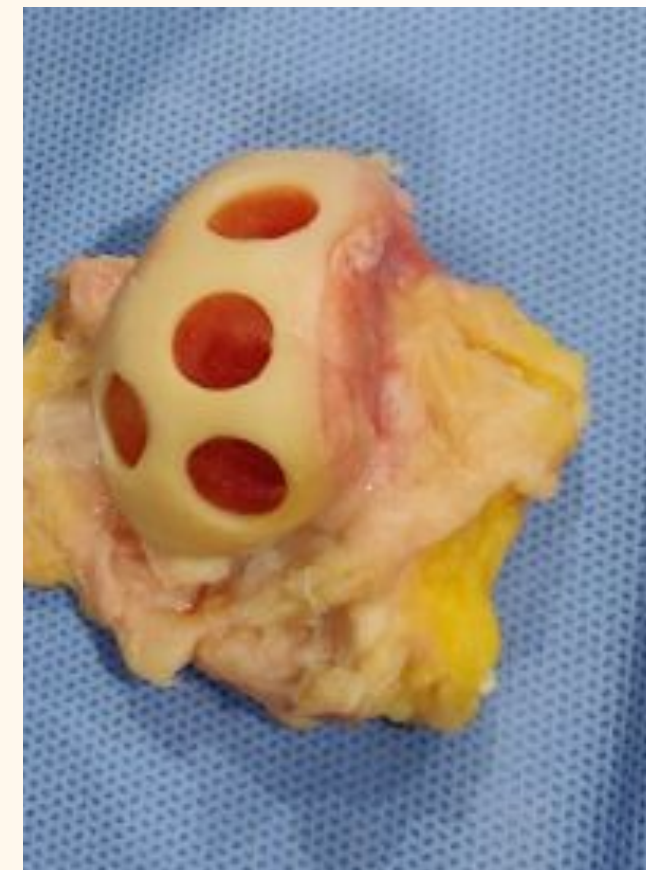
02

A medial parapatellar arthrotomy is made. The lesion is debrided until subchondral bone is exposed.



03

Using specific tools, 10mm diameter osteochondral graft cylinders are taken from a complete condyle from our tissue bank.



*The condyle is stored at specific freezers and preserved at -80°C.*





04

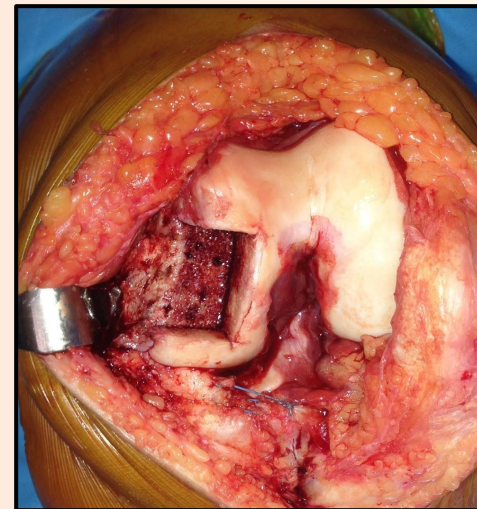
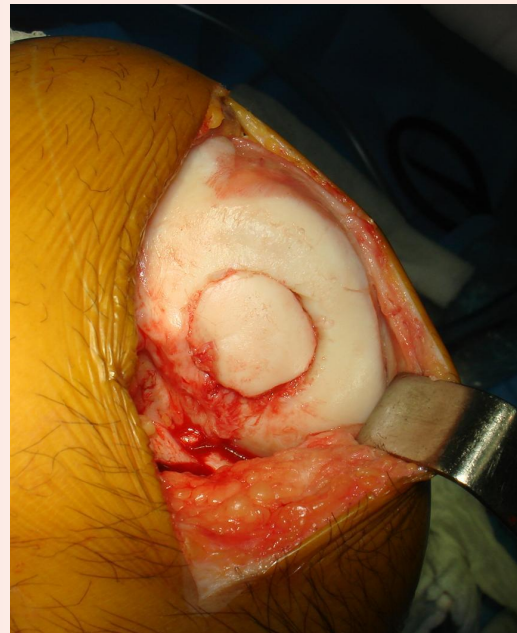
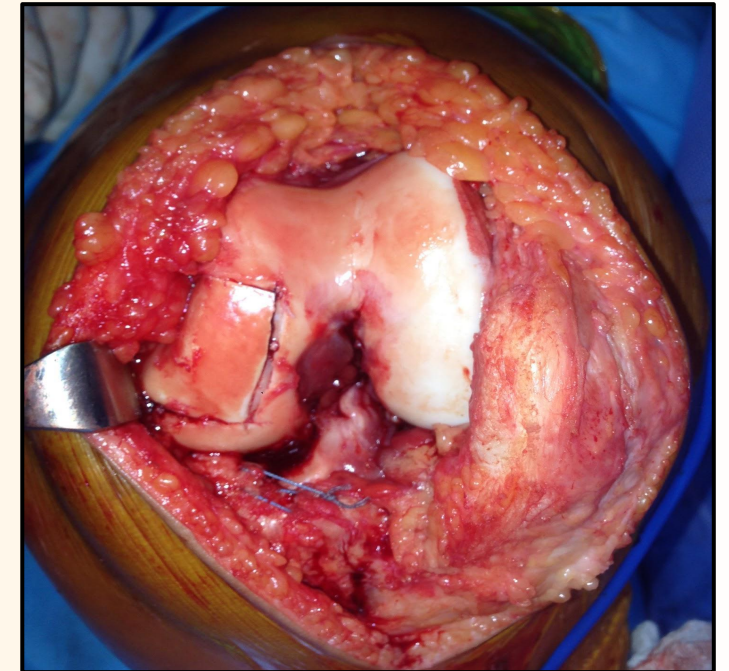
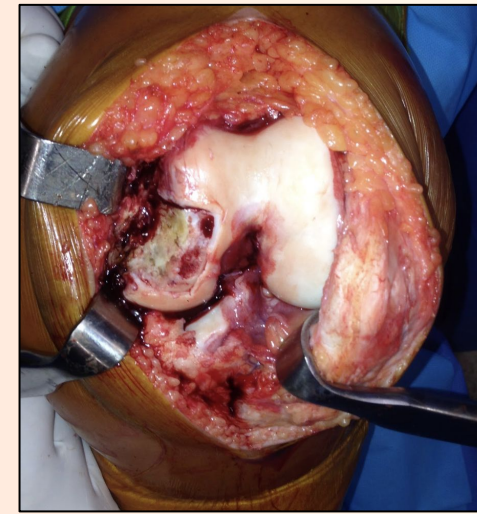
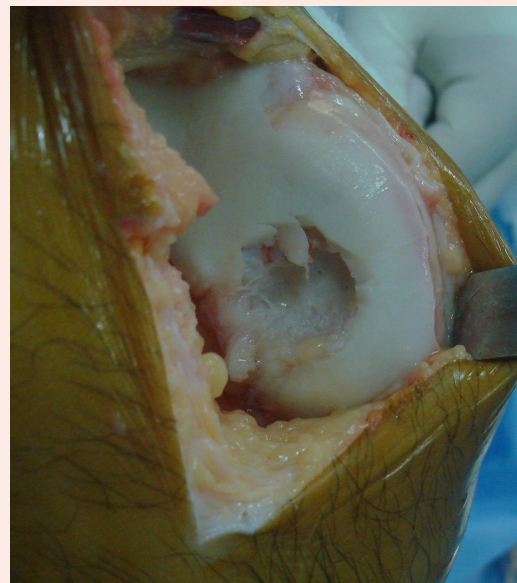
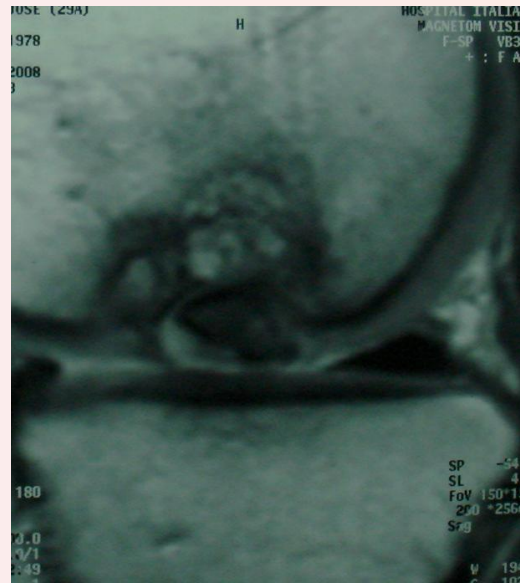
The recipient zone is prepared barely bigger than the obtained graft to have a correct press fit. The donor cartilage must be aligned with the receiving one.



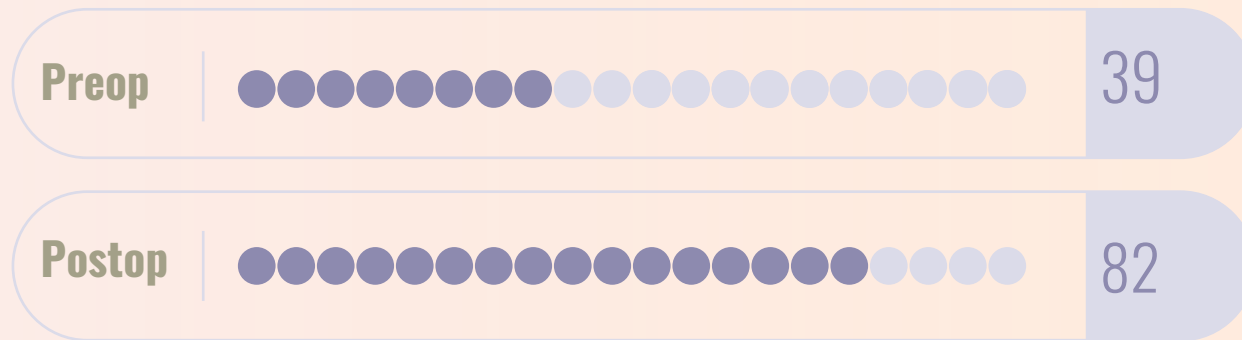
*As much grafts as needed will be used for covering the complete lesion*



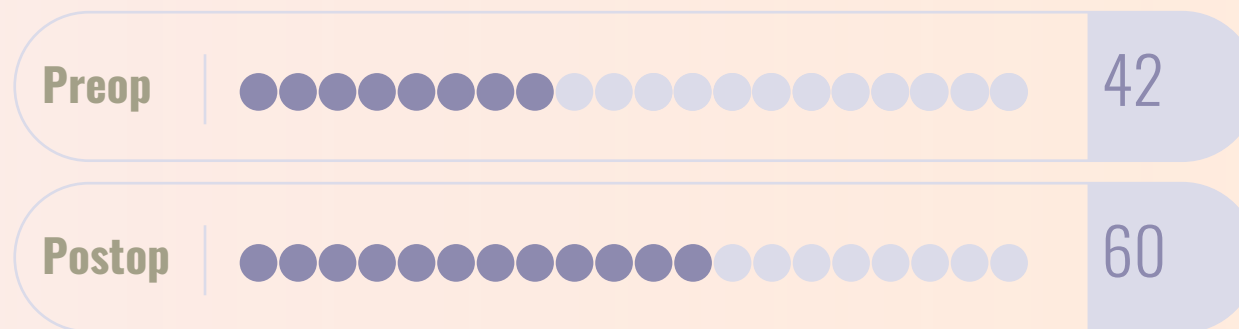
# Shell Technique considering size and shape of the defect



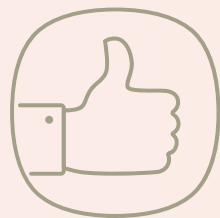
## Lysholm



## IKDC



Average time until second surgery



- Functional improvements were obtained, both in Lysholm and IKDC scores being these statistically significant ( $p < 0.01$ )
- 5 patients required an arthroplasty during the follow up (20%)





**Osteochondral allogeneic transplant are used in lesions sized more than 2.5cm<sup>2</sup> or patients who don't have a donor zone for having an autograft.**

**The minimal clinically important difference for knee osteochondral transplant for the IKDC score is 9.8. In our cohort the average difference was 18.**

**The value for obtaining a Substantial clinical benefit for the Lysholm scale is 25. In our series the average improvement was 43.**

**The results of our series not only show a statistical but also a clinical improvement.**



Using **fresh allograft**, different authors reported **similar failure rates** than the one on our series, where **frozen allograft** was used.

- *Levy et al. assessed 129 transplanted knees with **24% of failure rate***
- *Williams et al. reported 4 **clinical failures (21%)** after 19 fresh osteochondral transplants*



# Conclusion

**Our patients obtained a postoperative improvement, this could be observed in the Lysholm and IKDC scores ( $p < 0.01$ )  
The failure rate was 20%**

**Frozen osteochondral allograft is presented as a good alternative, reproducible and reliable**



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