

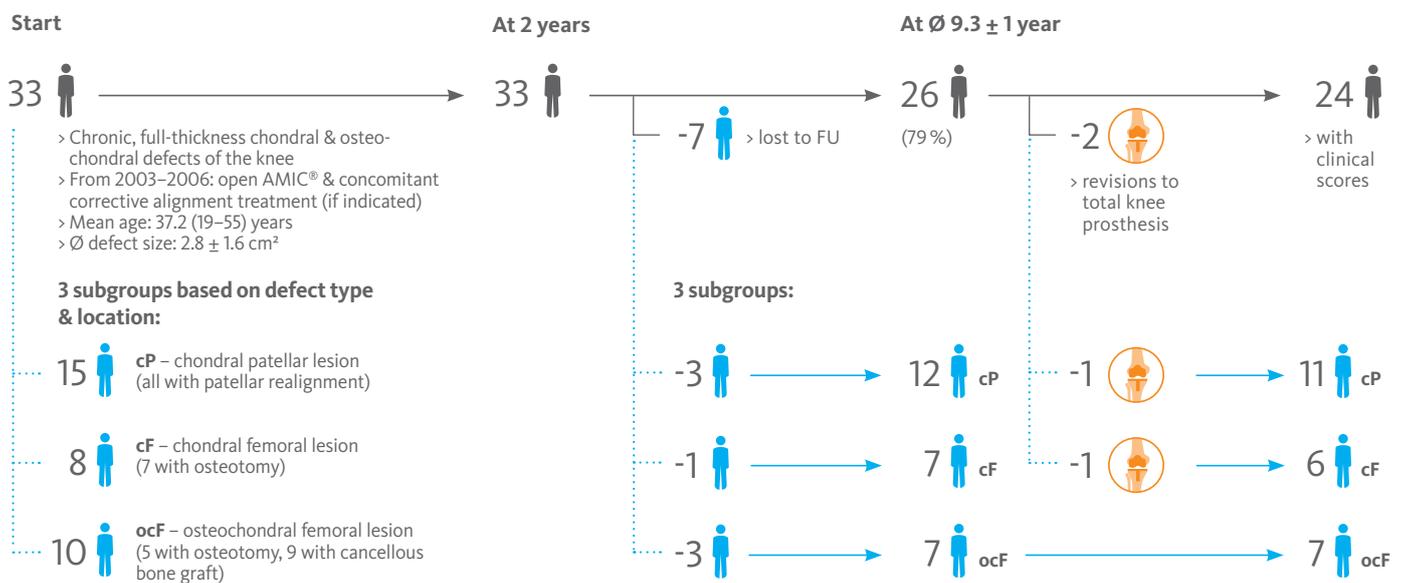
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# Long-lasting clinical benefits of AMIC® in the aligned knee

Nadine Kaiser, Roland P. Jakob, Geert Pagenstert, Moritz Tannast, Daniel Petek

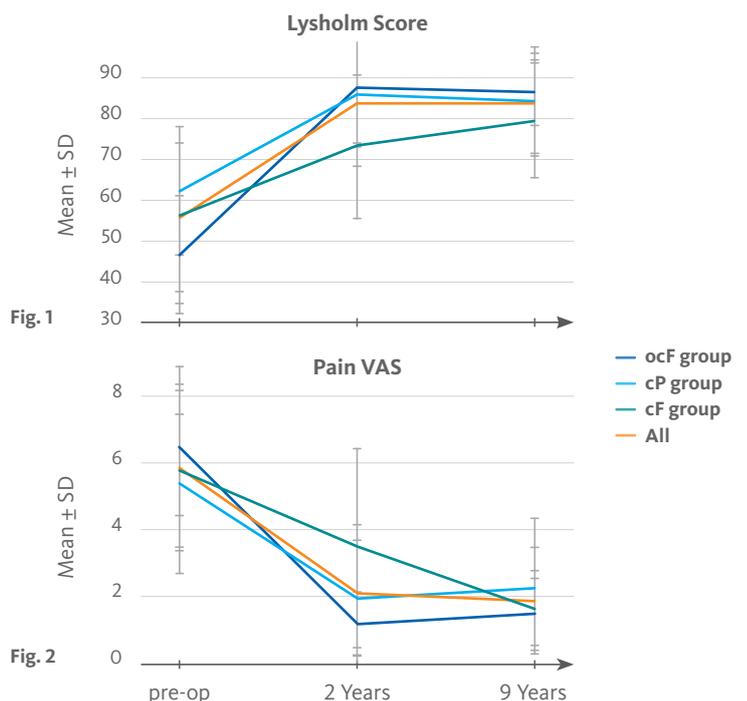
- > AMIC® Chondro-Gide® showed sustained improvement in pain and function at a mean 9.3 ± 1 years for patients with chronic, chondral and osteochondral lesions of the femoral condyles or patella in the aligned knee.
- > The study emphasizes the importance of a concomitant lower limb alignment correction for a good long-term outcome, which is particularly of benefit for younger adults with cartilage damage in the knee as well as compartmental overload.

## Retrospective single center case series (Level IV):



## Improvement in Pain and Function after an average of 9.3 ± 1 Years

- > Significant improvement in knee function (Lysholm, Fig. 1) and pain VAS (Fig. 2) scores for all subgroups at a mean 9.3 years after AMIC® compared to pre-op.
- > 2/26 (7.7%) patients required a total knee prosthesis at 9 and 10 years after the initial AMIC® procedure. Their scores were not included in the final mean scores.
- > The **overall mean Lysholm** and **VAS** scores improved significantly from pre-op to 2 years post-op. From 2 to 9 years, no significant differences in the mean scores were observed (Fig. 1 & 2, orange line).
- > **Subgroup analysis** revealed significant improvement in Lysholm and pain VAS at 2 years for the cP- and ocF-group compared to pre-op, however not for the cF-group. While the improvement remained stable up to 9 years for these 2 groups, the cF-group continued to improve from 2 to 9 years (Fig. 1 & 2, green line).



## CHONDRO-GIDE® LITERATURE HIGHLIGHT

The bilayer collagen membrane is an established product for cartilage therapies with 20 years of clinical use. AMIC® Chondro-Gide®, a technique that combines bone marrow stimulation with the use of a collagen membrane, has been used for over 15 years. Based on pre-clinical and clinical evidence, AMIC® was included in the treatment recommendations for cartilage lesions of the talus, knee and hip by the respective committees of the German Society for Orthopaedics and Trauma (DGOU).

Recently, the intended use of Chondro-Gide® was extended to augment meniscal repair by wrapping the membrane around the sutured meniscus. The corresponding meniscus wrapping technique is registered as AMMR™.

This literature highlight addresses important aspects of the evidence for the use of Chondro-Gide®.

## Conclusions

- > First study investigating **long-term outcome** after an **AMIC® procedure** for medium-sized cartilage lesions in the knee.
- > **Pain and function scores significantly improved** after **AMIC® combined** with a **concomitant realignment** procedure (if indicated per radiologic assessment) and **remained stable up to 10 years** after surgery.
- > **Limitations** of the study to be considered: a) heterogeneous patient population with respect to localization and cause of the underlying lesion, b) concomitant procedures performed during AMIC® may confound the results, and c) retrospective design of the single-center study is a known methodological weakness. Despite these limitations, the reported **results are favorable**, as there was a **low revision rate** of 7% at 9 years.
- > Younger patients may especially benefit from a procedure that can delay and potentially prevent the need for an early arthroplasty.
- > The study emphasizes the importance of a **combined strategy** with **cartilage repair** and **alignment correction** (where indicated) to achieve a **durable, long-lasting benefit** for the patients.

For details of the study refer to the original article:

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**ORTHOPAEDIC SURGERY**



### Stable clinical long term results after AMIC in the aligned knee

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- > Chondro-Gide®, the original AMIC® membrane<sup>1</sup>
- > One-step procedure for cartilage regeneration techniques<sup>1,2,3</sup>
- > With more than 10 years of clinical experience<sup>4</sup>



- 1 Geistlich Pharma AG, data on file
- 2 Schiavone Panni, A. et al. Good clinical results with autologous matrix-induced chondrogenesis (Amic) technique in large knee chondral defects. *Knee Surg Sports Traumatol* 2018 Apr;26(4):1130-1136. doi: 10.1007/s00167-017-4503-0. (Clinical study)
- 3 Niemeyer, P. et al. Significance of Matrix-augmented Bone Marrow Stimulation for Treatment of Cartilage Defects of the Knee: A Consensus Statement of the DGOU Working Group on Tissue Regeneration. *Z Orthop Unfall* 2018; 156(05): 513-532. doi: 10.1055/a-0591-6457
- 4 Kaiser, N. et al. Stable clinical long term results after AMIC® in the aligned knee. *Arch Orthop Trauma Surg*. 2020 Aug 13. doi: 10.1007/s00402-020-03564-7.