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CONGRESS
2023



Boston
Massachusetts
June 18–June 21

RISK FACTORS AFFECTING THE SURVIVAL RATE OF COLLAGEN MENISCUS IMPLANT (CMI) FOR PARTIAL MENISCUS DEFICIENCY.

AN ANALYSIS OF 156 CONSECUTIVE CASES AT 10 YEARS OF
FOLLOW-UP

Gian Andrea Lucidi, MD

**Alberto Grassi, Piero Agostinone, Giacomo Dal Fabbro, Stefano di
Paolo, Chiara D'Alberton, Nicola Pizza, Stefano Zaffagnini**





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Disclosures:

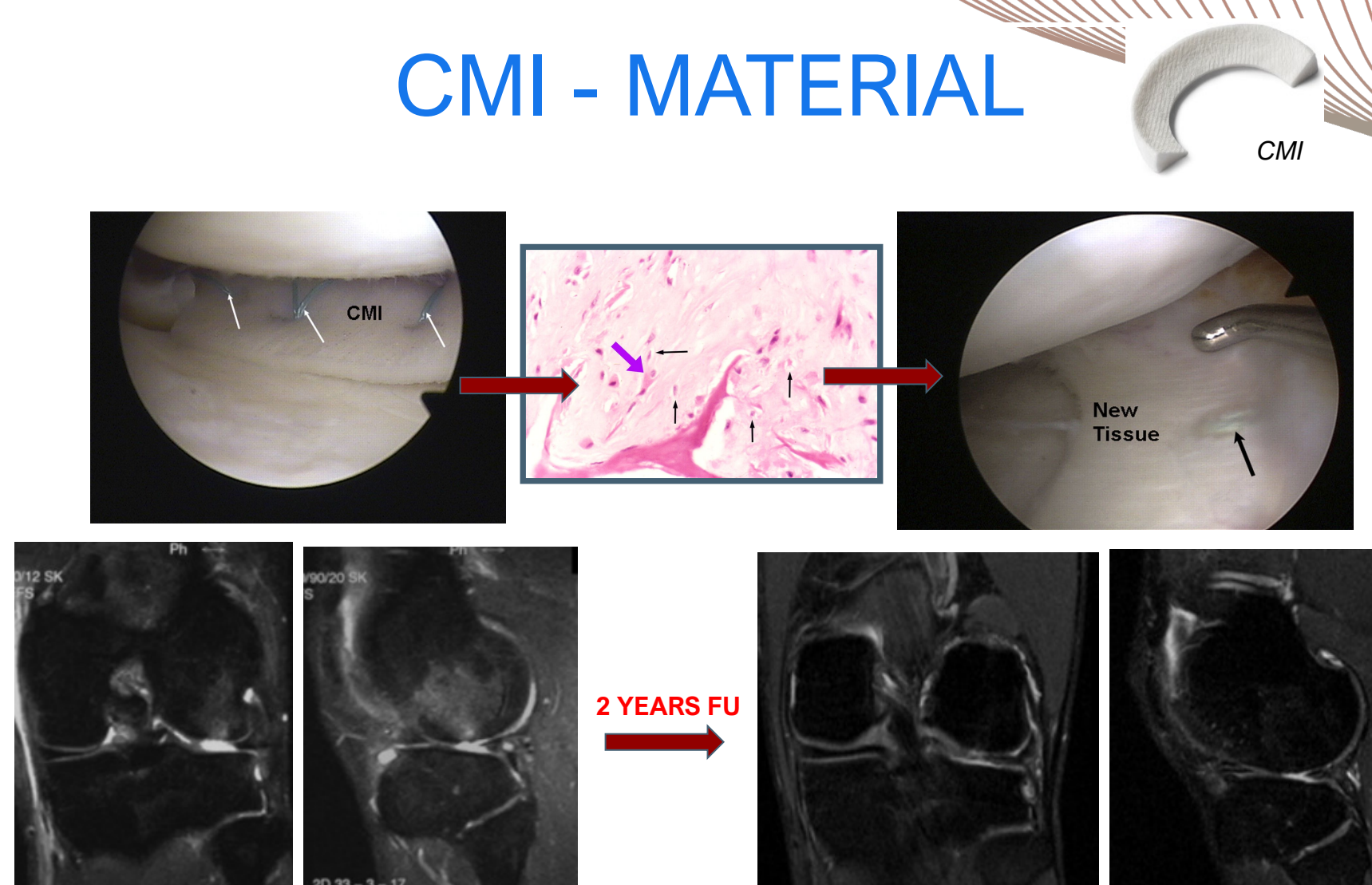
– S.Z.:

consultant for Smith and Nephew and Depuy Synthes

research support from Medacta and Depuy Synthes



CMI - MATERIAL



- COLLAGEN TYPE I (BOVINE)
- PROGRESSIVE REABSORPTION 6–18 MONTHS
- EVIDENCE OF MENISCUS-LIKE TISSUE



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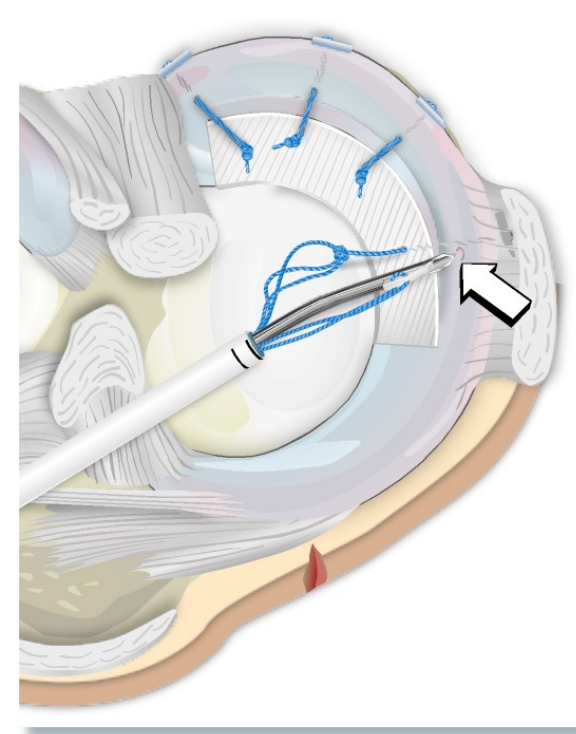
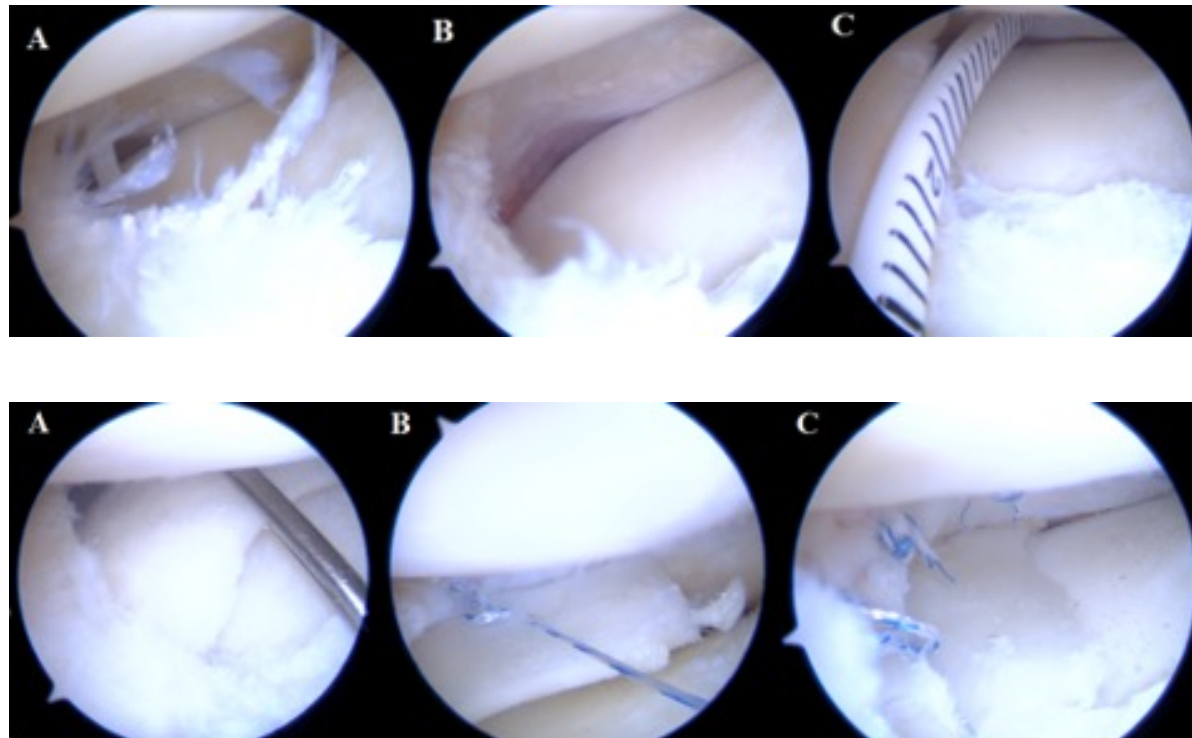


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RODKEY et al. JBJS 2008

ARTHROSCOPIC SURGICAL TECHNIQUE

“ALL-INSIDE SUTURE”



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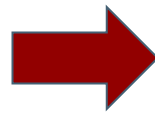


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INDICATIONS FOR SCAFFOLD IMPLANT

- **ACUTE** LESIONS (IRREPARABLE)
- **CHRONIC** MENISCAL DEFICIENCY (POST-MENISCECTOMY)
- **INTACT HORNS** and **PARTIAL DEFECT**

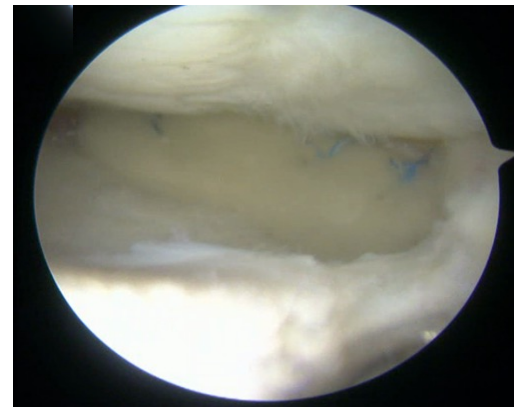
- NORMAL LIMB ALIGNMENT
- NO ACL INSUFFICIENCY



IF PRESENT, ADDRESS IT WITH COMBINED
PROCEDURE

Meniscal scaffolds: results and indications. A systematic literature review

Giuseppe Filardo • Luca Andriolo • Elizaveta Kon •
Francesca de Caro • Maurilio Marcacci



CMI: LONG-TERM METHODS

156 (84%) PATIENTS WITH **10.9 YEARS of MEAN** FOLLOW-UP (MINIMUM 5 YEARS)

- AGE AT SURGERY 42.0 ± 11.1 YEARS
- 75% MALES, 25% FEMALES
- 80% MEDIAL CMI, 20% LATERAL CMI
- **SURGICAL FAILURE:** PARTIAL SCAFFOLD REMOVAL (INFECTION, DISLOCATION, UKA, TKA)
- **CLINICAL FAILURE:** “POOR” LYSHOLM (<65 POINTS) or REQUIRING SECOND SURGERY DUE TO INCREASING PAIN or KNEE SYMPTOMS (Arthrolysis, stem cells, HTO)



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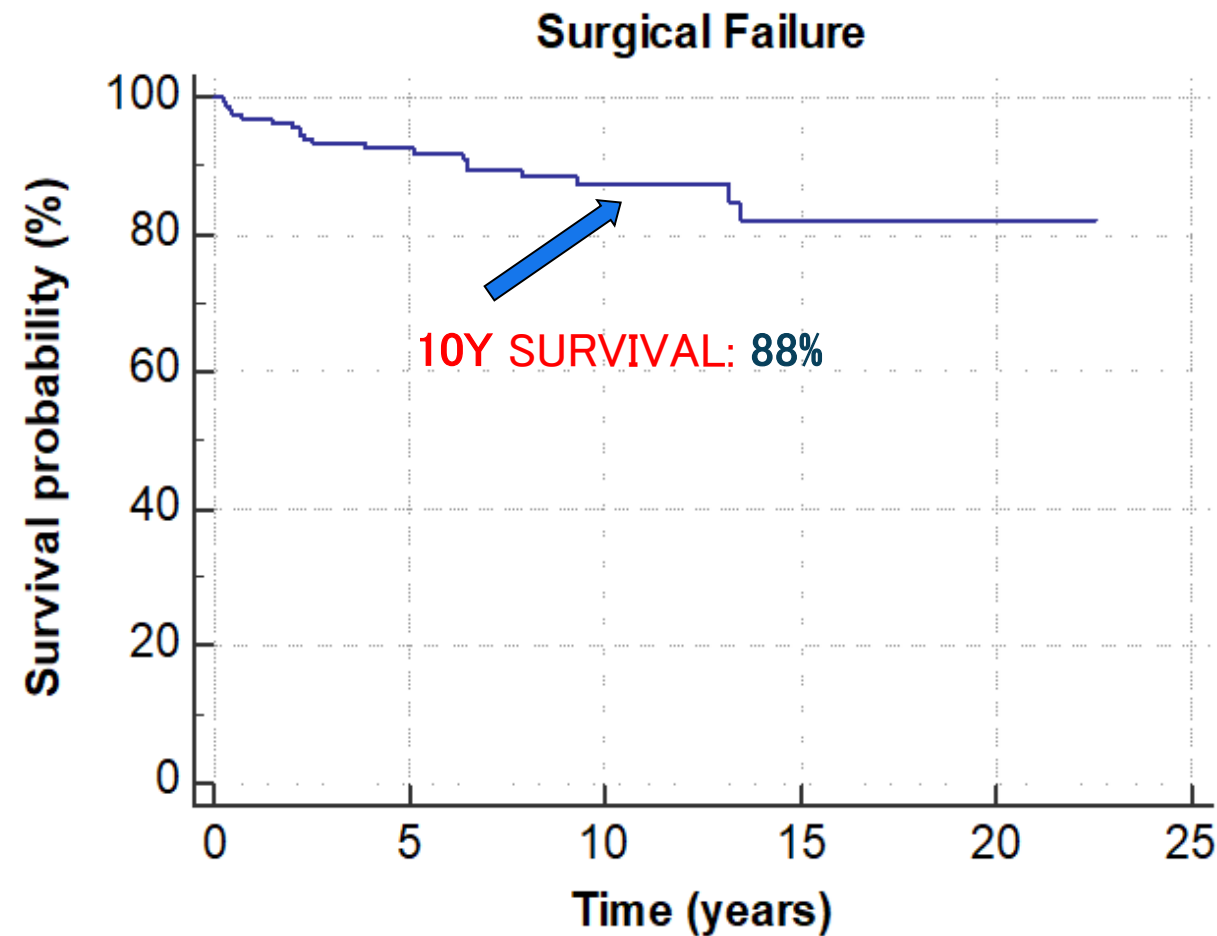
CMI: LONG-TERM METHODS

SURVIVAL ANALYSIS using SURGICAL and CLINICAL FAILURES as ENDOPOINTS

- SEX
- BMI (<25 vs ≥25)
- AGE AT SURGERY (<43 years vs ≥43 years)
SONG et al. AJSM 2020
- MEDIAL vs LATERAL CMI
- OUTERBRIDGE GRADE (0–II vs III–IV)
- COMBINED vs ISOLATED PROCEDURE
- TIME FROM MENISCECTOMY (≤1 years vs 1–10 years vs ≥10 years)



RESULTS: SURGICAL FAILURE



SURVIVAL RATE (88%)

19 SURGICAL FAILURES (12%):

- ✓ 1 CMI DISLOCATION
- ✓ 3 INFECTIONS
- ✓ 5 MAT
- ✓ 6 UKA
- ✓ 4 TKA

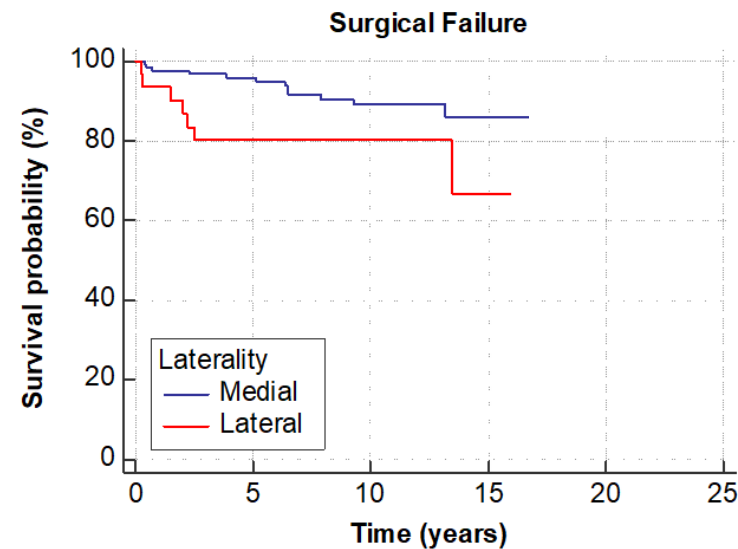


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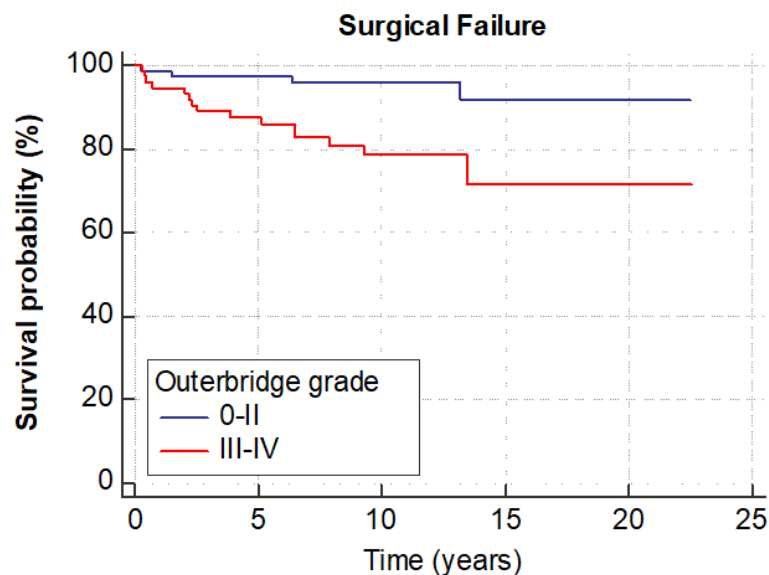
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RESULTS: SURGICAL FAILURE



MEDIAL vs LATERAL:

- 10 % MEDIAL CMI
- 19% LATERAL CMI → HR 3.2 for surgical failure

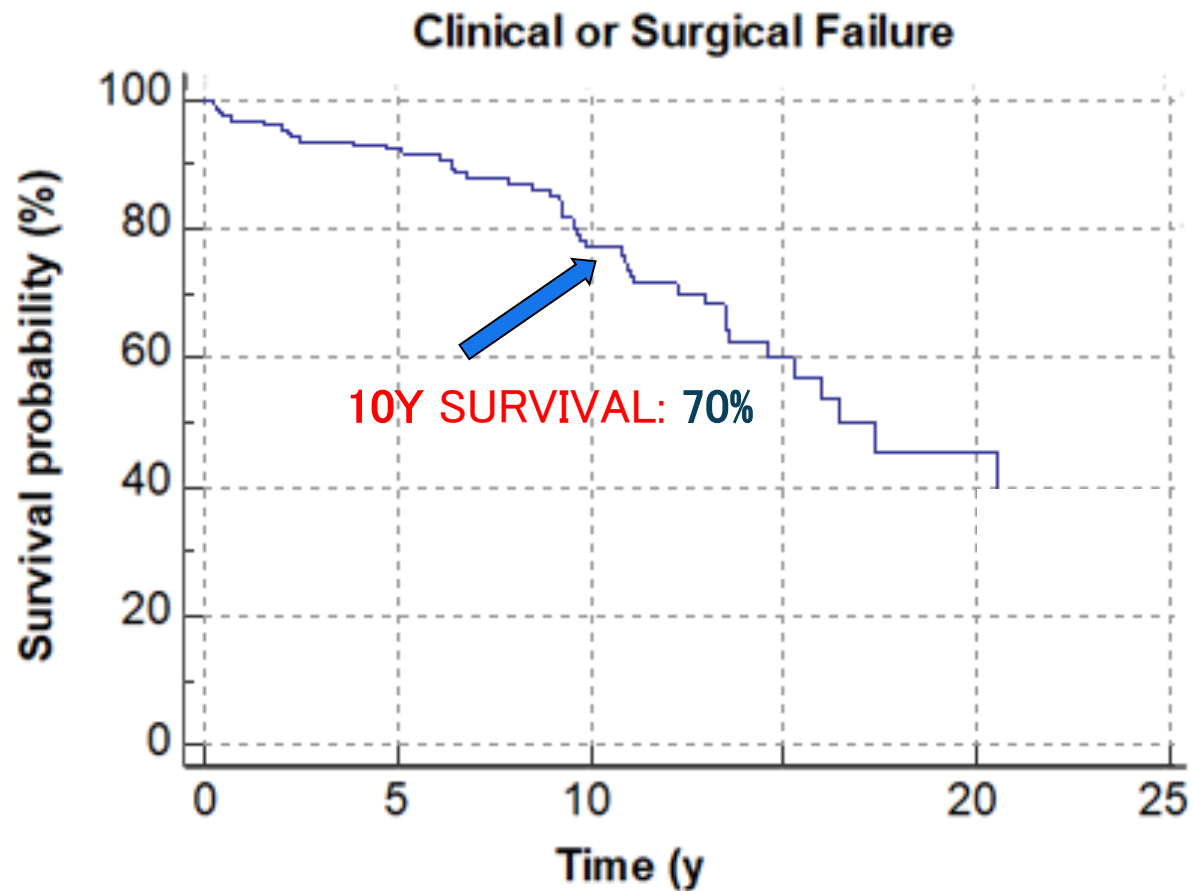


CARTILAGE:

- 0-II OUTERBRIDGE
- III-IV OUTERBRIDGE → 3.8 for surgical failure
- NO IMPACT of AGE, GENDER, BMI, COMBINED vs ISOLATED, TIME FROM MENISCECTOMY



RESULTS: CLINICAL + SURGICAL FAILURE



SURVIVAL RATE (70%)

47 PATIENTS (30%):

- ✓ 1 ARTHROLYSIS
- ✓ 2 HTO
- ✓ 3 STEM CELLS INJECT
- ✓ 21 "POOR LYSHOLM"
- ✓ 19 SURGICAL FAILURES

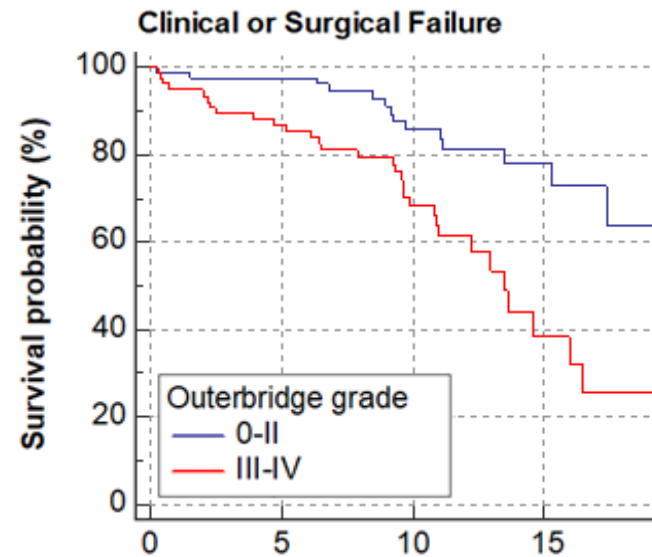


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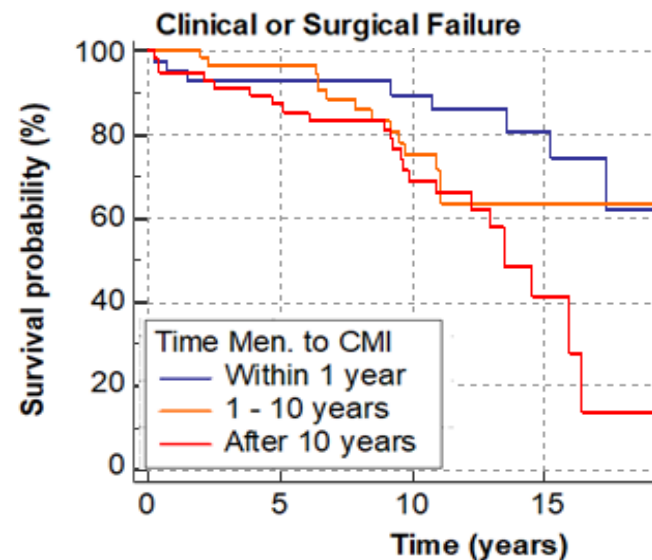
RESULTS: CLINICAL + SURGICAL FAILURE



CARTILAGE:

0-II OUTERBRIDGE

III-IV OUTERBRIDGE → HR 2.8 for failure



TIME FROM MENISCECTOMY:

WITHIN 1 YEAR: 90%

1-10 YEARS: 75%

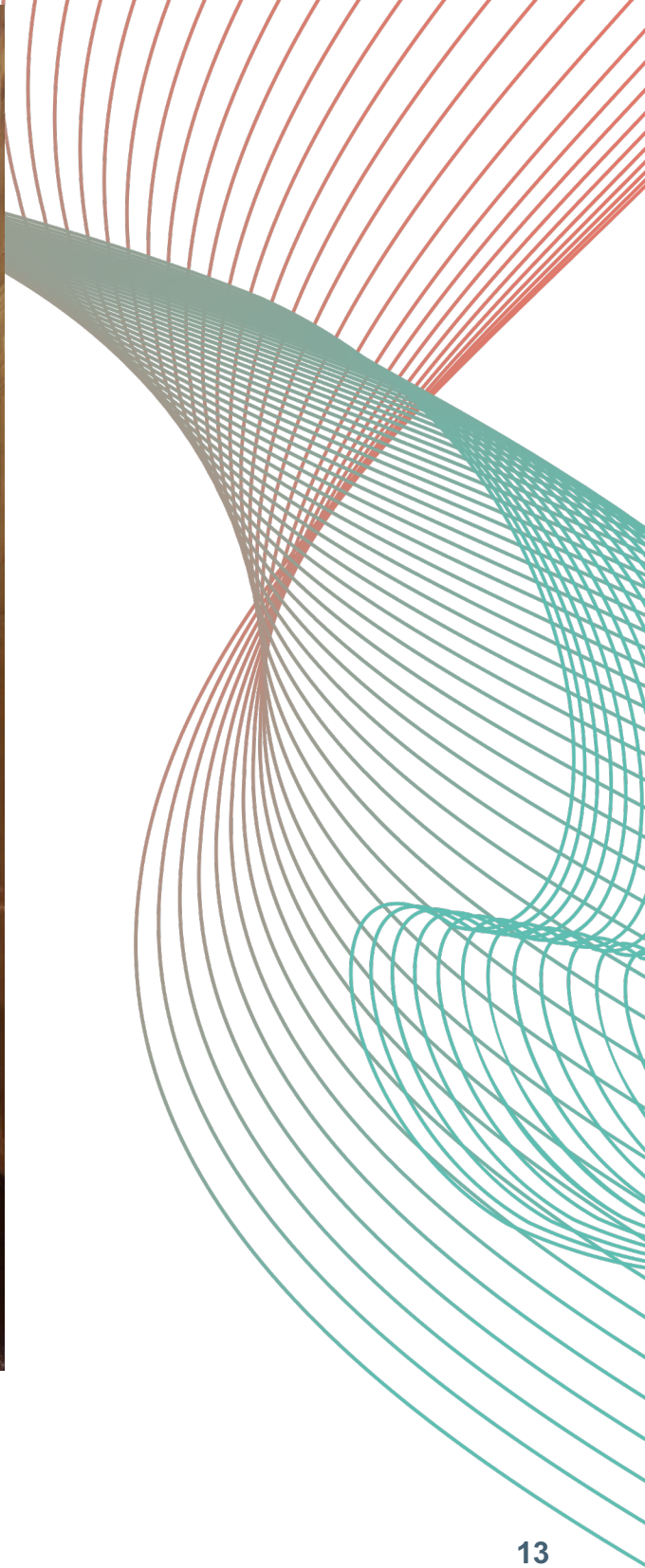
>10 YEARS: 69% → HR 2.8 for surgical failure

NO IMPACT of AGE, GENDER, BMI, COMBINED vs ISOLATED.

CONCLUSION

- ✓ **CMI PROVIDED SATISFACTORY LONG TERM RESULTS**
- ✓ **AT 11 YEARS 88% CMI STILL IN SITU**
- ✓ **LATERAL SCAFFOLD and CARTILAGE STATUS INFLUENCE SURGICAL FAILURES**
- ✓ **TIME FROM MENISCECTOMY AFFECTS THE CLINICAL OUTCOMES**





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