

Outcome of meniscus treatment and subsequent meniscus tears after primary anatomical anterior cruciate ligament reconstruction

**Department of Orthopaedic Surgery
Hirosaki University Graduate School of Medicine**



**Yuka Kimura, M.D., Eiichi Tsuda, M.D., Yuji Yamamoto, M.D.,
Shugo Maeda, M.D., Takuya Naraoka, M.D.
and Yasuyuki Ishibashi, M.D.**

Disclosure

- Yuka Kimura, M.D.
- Eiichi Tsuda, M.D.
- Yuji Yamamoto, M.D.
- Shugo Maeda, M.D.
- Takuya Naraoka, M.D.
- Yasuyuki Ishibashi, M.D.

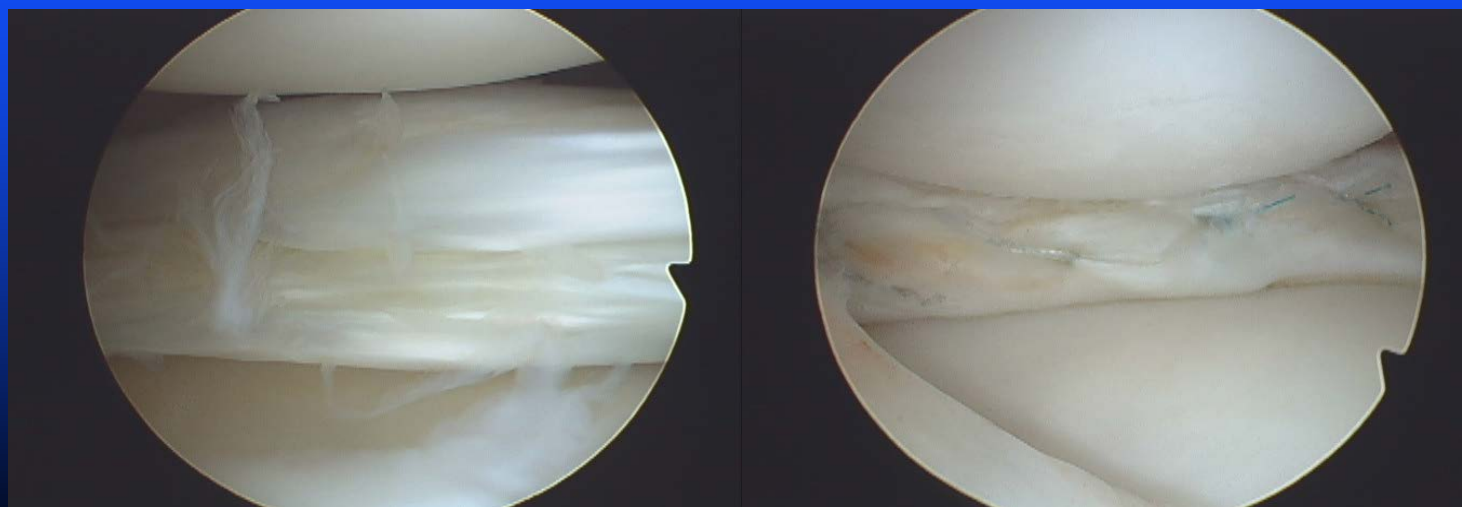
We have no financial conflicts to disclose.

Meniscal injury with ACL injury

- **Meniscal injury**
 - ◆ Frequently associated with ACL injuries. [1,2]
 - ◆ Repair is commonly performed concurrently with ACL reconstruction.
- **Anatomical ACLR**
 - ◆ Improved knee joint stability and provided good clinical outcomes. [3,4]
- **However, subsequent meniscal tears after ACLR remain a problem and are still unclear.**

Purpose

- To investigate the outcome of meniscal treatment with concurrent ACLR and subsequent meniscus tears after primary ACLR



Subjects

- **Primary ACLR**
 - ◆ **2003-2012**
 - ◆ **Minimum 2 year f/u**
 - ◆ **Exclusion criteria**
 - **ACL revision**
 - **Multiple ligament injury**
 - **OA (KL3≤)**
 - **Combined HTO**

Assessments

- **At ACLR**

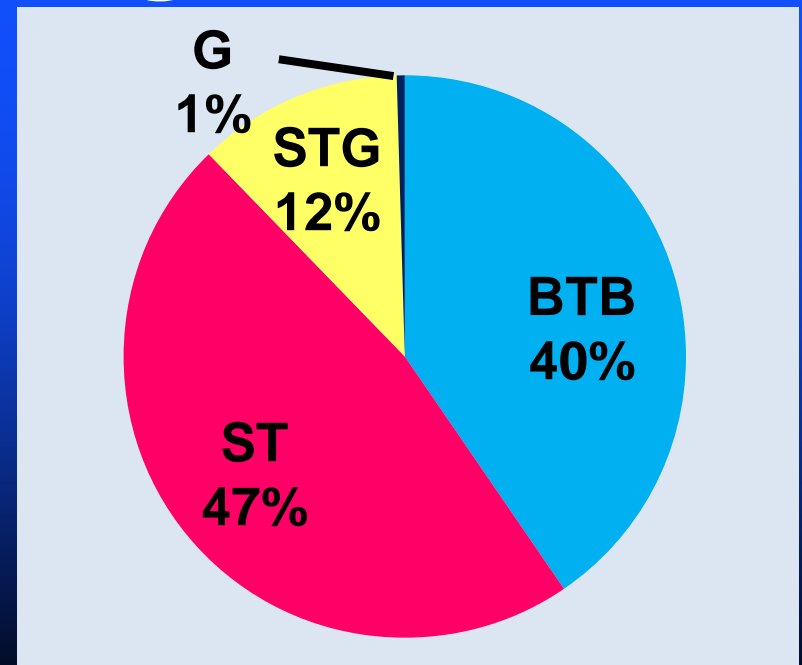
- ◆ **Age, BMI, Type of graft**
- ◆ **Time from injury to ACLR**
- ◆ **Surgical treatment of meniscus at ACLR**

- **At meniscus op.**

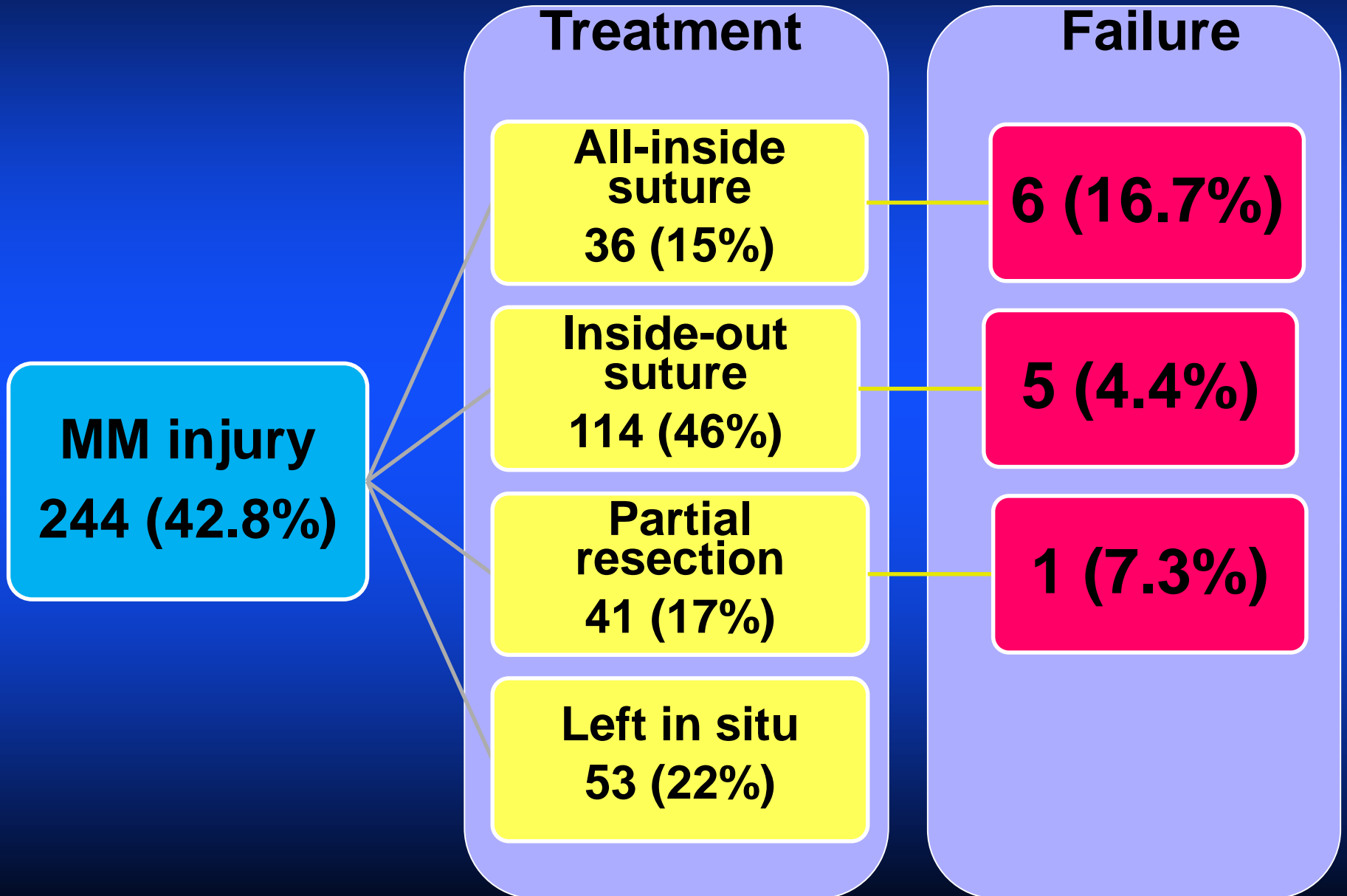
- ◆ **Time from ACLR to meniscus op.**
- ◆ **Traumatic history**
- ◆ **Knee stability**

Results Demographic data at ACLR

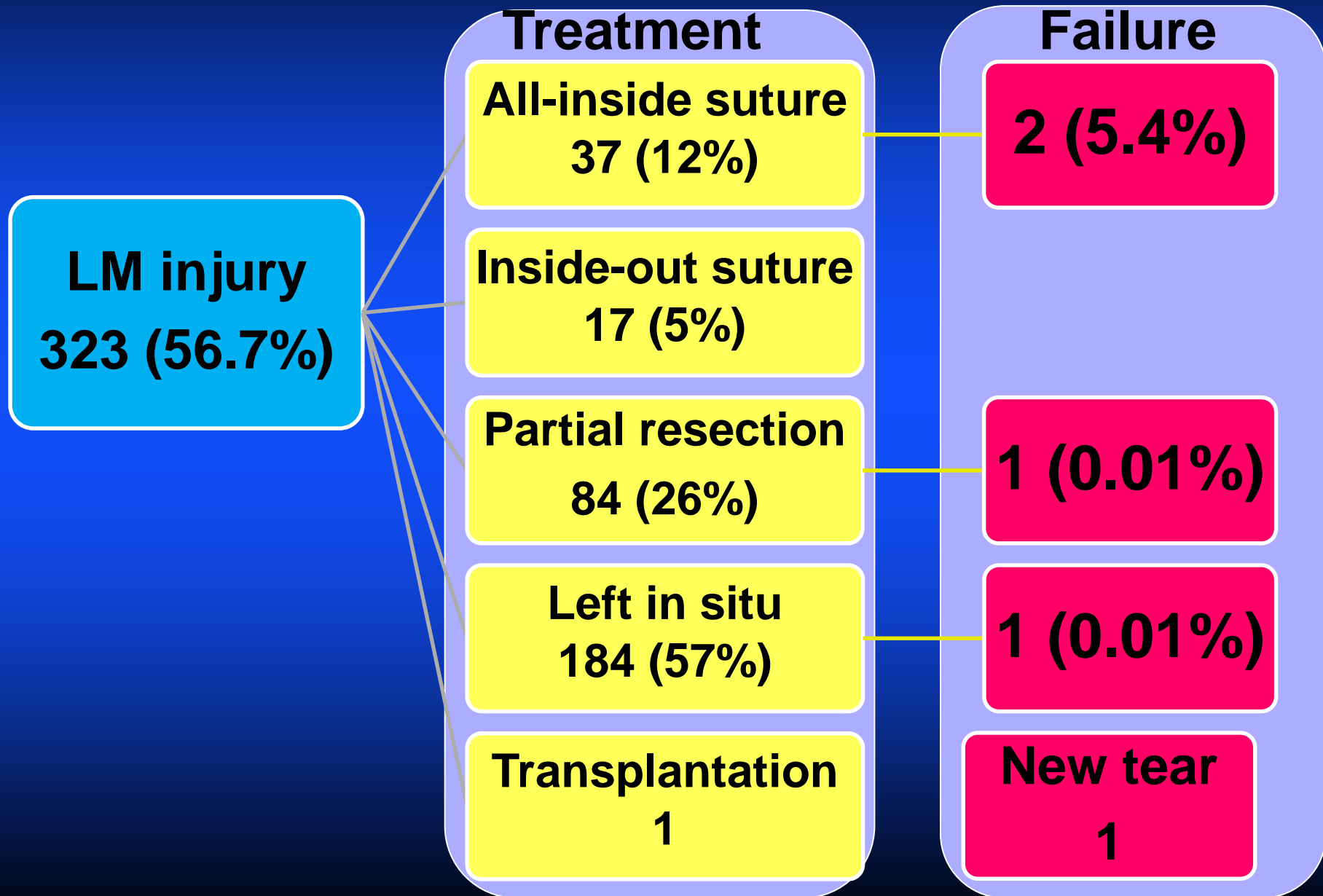
- 570 ACLRs
 - ◆ 296 Females and 274 Males
- Av. age: 24.6 (11-66) y.o.
- Av. BMI: 23.5 ± 3.7 kg/m²
- Type of graft



Results Outcome of MM treatment



Results Outcome of LM treatment



Summary of data in meniscus failure

	MM	LM	Total
Subsequent meniscus tears after ACLR	12	5	17
ACLR to meniscus op. (days)	720	1129	841
Age at ACLR (years)	19	20	18
Traumatic episode	8	0	8
KT-1000	0.8	1.0	1.0±0.9

Summary of failure after meniscus suture

	MM	LM
All-inside suture	6/36 16.7%	2/37 5.4%
Inside-out suture	5/114 4.4%	0
Total	11/150 7.3%	2/54 3.7%

- In MM, failure rate of all-inside suture was significantly higher than that of inside-out suture ($p < 0.05$).

Conclusions

- Young patients were at risk of meniscus re-injury or subsequent meniscus tear after ACLR.
- In MM repair, failure rate of all-inside suture was significantly higher than that of inside-out suture.
- Inside-out suture of MM repair was better than all-inside suture for young patients.

References

1. Ahlden M, AJSM 2012
2. Garanan LP, Acta Orthop 2012
3. Ishibashi Y, AJSM 2010
4. Tsuda E, AJSM 2010

