



# ACL-R IN PATIENTS OVER 50

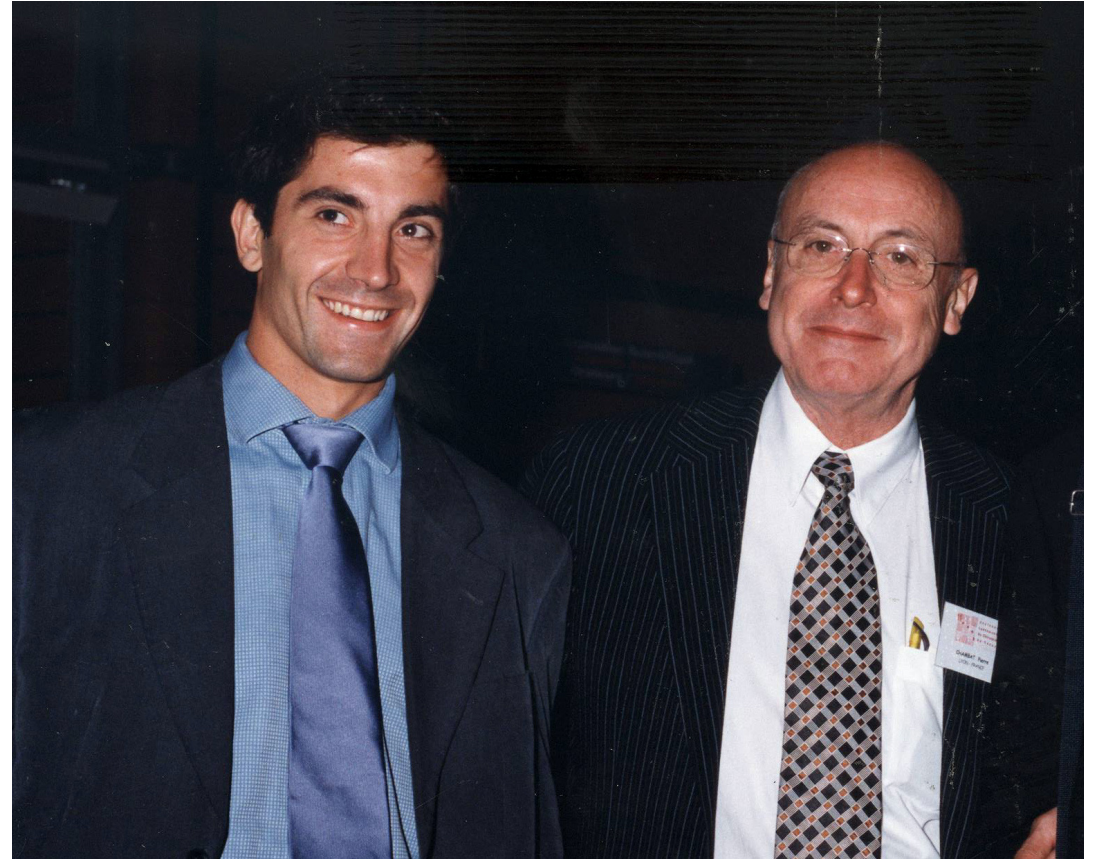
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Jean-Marie FAYARD

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France*

SANTY<sup>®</sup>  
MEDICAL  
INNOVATION  
IN MOTION

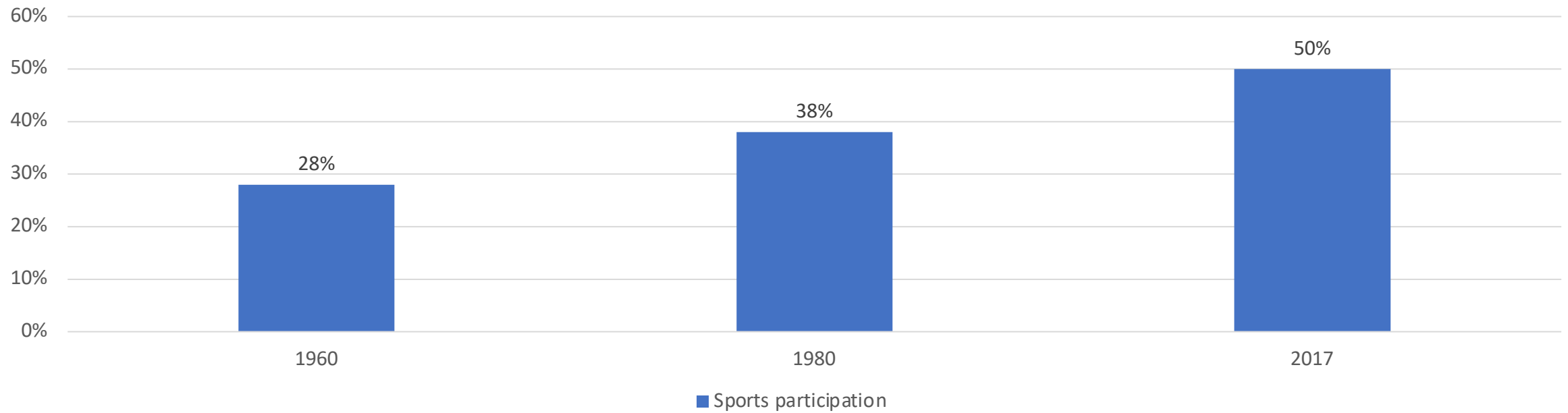




# DEMOGRAPHICS

- Middle age individuals will double by 2050
- Figueroa *The Knee 2014*

## Sports participation



## DEMOGRAPHICS

- 2017:  
30% > 55 Yo in the French population
- 33% practice sport  $\geq$  1/week
- 10% practice pivoting sports

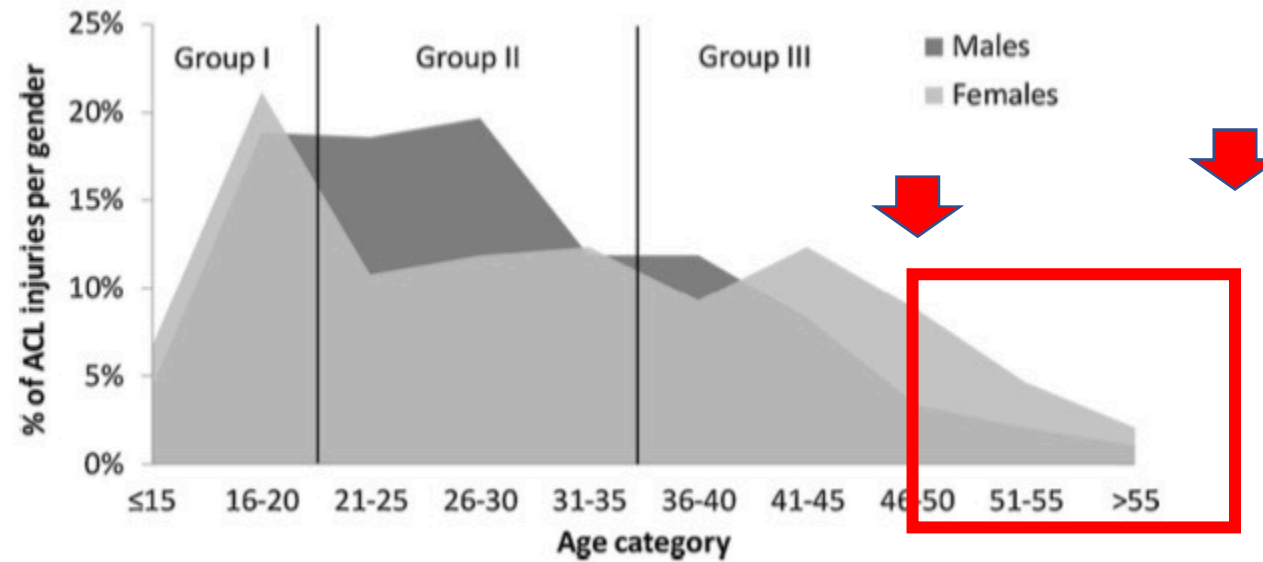


# There is no such thing like a single ACL injury: Profiles of ACL-injured patients



R. Seil<sup>a,b,c,\*</sup>, C. Mouton<sup>b,c</sup>, A. Lion<sup>b,c</sup>, C. Nührenbörger<sup>a</sup>, D. Pape<sup>a,b,c</sup>, D. Theisen<sup>b,c</sup>

OTSR 2016



# Non-operative treatment of ruptures of the anterior cruciate ligament in middle-aged patients. Results after long-term follow-up

M G Ciccotti <sup>1</sup>, S J Lombardo, B Nonweiler, M Pink

JBJS Am 1994

- **83 % satisfactory outcome without surgery**  
**(rehabilitation and modified activity)**

Mean age: 46 years!

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- **Dissatisfied patients:**
  - *instabilities*
  - *competitive pivoting sports*

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- **Dissatisfied patients:**
  - *instabilities*
  - *competitive pivoting sports*

*Such patients MAY NEED operative reconstruction to achieve their goals...*



- Less invasive procedure



- Less invasive procedure



- Shorter hospital stay



- Less invasive procedure



- Shorter hospital stay



- Non aggressive rehab protocol  
postop pain control



# Candidates for ACL surgery in 1990




# Candidates for ACL surgery in 2000?






## Quadriceps autograft is a viable graft choice for arthroscopic ACL reconstruction in patients over 50 years of age

Amit Meena<sup>1,2,3</sup> · Luca Farinelli<sup>4</sup> · Christian Hoser<sup>1,2</sup> · Elisabeth Abermann<sup>1,2</sup> · Akshya Raj<sup>5</sup> · Caroline Heppinger<sup>1</sup> · Mirco Herbort<sup>2,6</sup> · Christian Fink<sup>1,2</sup> 



## Arthroscopic anterior cruciate ligament reconstruction is a reliable option to treat knee instability in patients over 50 years old

Jordan Ovigue<sup>1</sup>  · Nicolas Bouguennec<sup>1</sup> · Nicolas Gravelau<sup>1</sup>



## Factors affecting outcome of ACL reconstruction in over-50-year-olds

Jean-Marie Fayard<sup>a</sup>, Frank Wein<sup>b</sup>, Matthieu Ollivier<sup>c</sup>, Regis Paihle<sup>d</sup>, Matthieu Ehlinger<sup>e</sup>, Sébastien Lustig<sup>f</sup>, Jean-Claude Panisset<sup>g,\*</sup>, the French Arthroscopic Society<sup>h</sup>



- 83%-86% RTS at the same level
- 72-83% return to pivoting sports

Do older patients have worse results than younger ones?



Original article

## ACL reconstruction in over-50 year-olds: Comparative study between prospective series of over-50 year-old and under-40 year-old patients



OTSR 2019

Jean-Claude Panisset<sup>a,\*</sup>, Jean-François Gonzalez<sup>b</sup>, Christophe de Lavigne<sup>c</sup>, Quentin Ode<sup>d</sup>, David Dejour<sup>e</sup>, Matthieu Ehlinger<sup>f</sup>, Jean-Marie Fayard<sup>g</sup>, Sébastien Lustig<sup>d</sup>, the French Arthroscopic Society<sup>h</sup>

	> 50 yo (n=228)	<40 yo (n=130)	
Time to surgery	23.6 weeks	8.7 weeks	P<0.001
Cartilage lesions	27%	1%	P<0.001
Meniscal lesions	68%	38%	P<0.001
Complications (early/late)	15% / 14%	0% / 11%	P<0.001 / NS
Side to side laxity	2.2	2.2	NS
KOOS	85.8	90.1	P<0.001
Tegner diff (pre –post)	-0.3	-0.5	NS

Original article

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# Do older patients have worse results than older ones?

- **Greater risk for early complications (hematoma)**
  - **Lower functional score BUT lower demand**
  - **Similar improvement in sports activity level**

**Does the type of graft influence results?**

# Influence of operative technique on anterior cruciate ligament reconstruction in patients older than 50 years

Quentin Ode<sup>a</sup>, Jean-François Gonzalez<sup>b</sup>, Régis Pailhe<sup>c</sup>, David Dejour<sup>d</sup>, Matthieu Ollivier<sup>e</sup>, Jean-Claude Panisset<sup>f</sup>, Sébastien Lustig<sup>a,g,\*</sup>, the French Arthroscopic Society<sup>h</sup>

OTSR 2019

	Prospective cohort (n = 228)	Retrospective cohort (n = 398)
Tegner Activity Score, mean (range)	4.9 (1.0–9.0)	5.1 (23.2–100.0)
Graft type: Hamstrings	4.89 (2.0–9.0)	5.12 (1.0–9.0)
PT/QT	5.10 (1.0–9.0)	4.99 (1.0–9.0)
Femoral fixation: Cortical	4.94 (2.0–9.0)	5.10 (1.0–9.0)
Press-fit	4.62 (1.0–6.0)	5.01 (1.0–9.0)
KOOS, mean (min-max)	84.9 (38.0–100.0)	87.4 (23.2–100.0)
Graft type: Hamstrings	85.9 (47.6–100.0)	87.0 (23.2–100.0)
PT/QT	85.2 (41.8–99.4)	84.1 (23.2–100.0)

**No difference**

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OTSR 2019

	Prospective cohort (n = 228)	Retrospective cohort (n = 100)
Tegner Activity Score, mean (range)	4.9 (1.0–9.0)	4.9 (1.0–9.0)
Graft type: Hamstrings	4.89 (2.0–9.0)	4.99 (1.0–9.0)
PT/QT	5.10 (1.0–9.0)	5.10 (1.0–9.0)
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PT/QT	85.2 (41.8–99.4)	84.6 (31.0–100.0)

**No difference**



**Does the type of graft influence results?**

**NO! Do the technique you are used to...**

Does surgery provide benefits  
compared to functional treatment?

# Anterior cruciate ligament reconstruction in the over-50s. A prospective comparative study between surgical and functional treatment



Matthieu Ehlinger<sup>a,b,\*</sup>, Jean-Claude Panisset<sup>c</sup>, David Dejour<sup>d</sup>, Jean-Francois Gonzalez<sup>e</sup>, Régis Paihle<sup>f</sup>, Henri Favreau<sup>a</sup>, Matthieu Ollivier<sup>g</sup>, Sébastien Lustig<sup>h</sup>, the Francophone Arthroscopy Society (SFA)<sup>i</sup>

OTSR 2021

	Surgical (n=288)	Non surgical (n=92)	
FU (months)	14.2 (+/-3.8)	18	NS
Age	54.8 (+/-4.3)	59.9 (+/-6.6)	P<0.001
Side to side laxity (mm)	6.5 (+/-3.4)	4.5 (+/-2.8)	P<0.001
Preop pivot shift (marked/explosive)	67%	30%	P<0.001

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Side to side laxity	2.2 (+/-2.4)	4.2 (+/-3.2)	P<0.001
Preop pivot shift (marked/explosive)	2%	16%	P<0.001
Postop Tegner	4.9 (+/-1.6)	4.1 (+/-1.6)	P<0.001
ACL-RSI	70.8 (+/-19.7)	60.7 (+/-27.2)	P<0.001

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Does surgery provide benefits compared to functional treatment?

**YES!**

**Better control AP laxity and rotation  
RTS with higher confidence and level**



What are the factors  
associated with bad results?

## Factors affecting outcome of ACL reconstruction in over-50-year-olds

Jean-Marie Fayard<sup>a</sup>, Frank Wein<sup>b</sup>, Matthieu Ollivier<sup>c</sup>, Regis Paihle<sup>d</sup>, Matthieu Ehlinger<sup>e</sup>, Sébastien Lustig<sup>f</sup>, Jean-Claude Panisset<sup>g,\*</sup>, the French Arthroscopic Society<sup>h</sup>



OTSR 2019

FU 42 months	Good results IKDC A & B (n=306)	Bad results IKDC C & D (n=92)	
Preop pivot shift (marked/explosive)	8%	15.6%	P=0.02
Preoperative medial OA	22.4%	39.9%	P<0.001
Medial meniscal lesion	49.9%	68.9%	P=0.002

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## Female gender and medial meniscal lesions are associated with increased pain and symptoms following anterior cruciate ligament reconstruction in patients aged over 50 years

David Dejour<sup>1</sup> · Christophe de Lavigne<sup>2</sup> · Jean-Claude Panisset<sup>3</sup> · Jean-François Gonzalez<sup>4</sup> · Quentin Ode<sup>5</sup> · Matthieu Ehlinger<sup>6</sup> · Sebastien Lustig<sup>7</sup> · The Francophone Arthroscopy Society

Higher BMI, meniscal and cartilage lesions significantly compromise the clinical outcomes



# CONCLUSION

FUNCTIONAL TREATMENT

Good functional results

Reduce activity

# CONCLUSION

## SURGICAL TREATMENT

Demanding patients

Instability

Don't wait for cartilage and meniscal lesions

AL reconstruction for rotational instability?



THANK YOU

