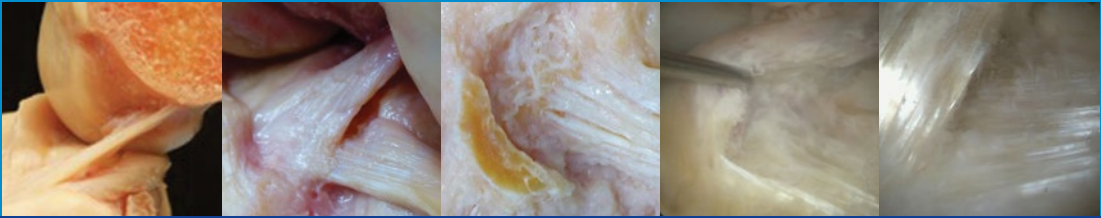


Rainer Siebold
David Dejour
Stefano Zaffagnini
Editors



Anterior Cruciate Ligament Reconstruction

A Practical
Surgical Guide



 Springer

Contents

Part I Anatomy

- 1 Ribbonlike Anatomy of the Anterior Cruciate Ligament from Its Femoral Insertion to the Midsubstance . . .** 3
Robert Śmigielski, Urszula Zdanowicz,
Michał Drwięga, Bogdan Ciszek, and Rainer Siebold
- 2 Anatomic and Histological Analysis of the Midsubstance and Fanlike Extension Fibers of the ACL.** 11
Tomoyuki Mochizuki, Akimoto Nimura, Kazunori Yasuda,
Takeshi Muneta, and Keiichi Akita
- 3 Tibial C-Shaped Insertion of the Anterior Cruciate Ligament Without Posterolateral Bundle.** 19
Rainer Siebold, Peter Schuhmacher, Axel Brehmer,
Francis Fernadez, Robert Śmigielski, and Joachim Kirsch
- 4 Variations of the Tibial Insertion of the Anterior Cruciate Ligament: An Anatomical Study.** 29
Robert Śmigielski, Urszula Zdanowicz, Michał Drwięga,
Bogdan Ciszek, Christian Fink, and Rainer Siebold
- 5 Arthroscopic Appearance of the “C”-Shaped Insertion of the Anterior Cruciate Ligament.** 33
Rainer Siebold and Robert Śmigielski

Part II Biomechanics

- 6 Biomechanics of the Knee with Intact Anterior Cruciate Ligament** 39
Milos Dordevic and Michael T. Hirschmann
- 7 Injury Mechanisms of ACL Tear.** 49
Milos Dordevic and Michael T. Hirschmann
- 8 Biomechanics of the Knee After Complete and Partial ACL Tear** 55
Milos Dordevic and Michael T. Hirschmann

Part III ACL Augmentation

- 9 History, Physical Examination and Imaging** 61
Mark Bergin, Marcus Hofbauer, Bruno Ohashi,
and Volker Musahl
- 10 Arthroscopic Assessment of Partial ACL Tears** 73
Rainer Siebold
- 11 Conservative versus Operative Treatment** 77
Jürgen Höher and Christoph Offerhaus
- 12 Reasons for ACL Augmentation** 85
Philippe Colombet and Rainer Siebold
- 13 Surgical Technique** 89
Bertrand Sonnery-Cottet, Philippe Colombet,
Rainer Siebold, Pooler Archbold, Pierre Chambat,
Jacopo Conteduca, and Mathieu Thaunat
- 14 Literature Results** 99
Bertrand Sonnery-Cottet, Jacopo Conteduca, Pooler Archbold,
and Mathieu Thaunat

Part IV Single Bundle ACL Reconstruction

- 15 Diagnostics** 109
Rainer Siebold, Volker Musahl, Yuichi Hoshino,
Christopher D. Murawski, and Georgios Karidakis
- 16 Timing of ACL Surgery: Any Evidence?** 123
Michael E. Hantes and Alexander Tsarouhas
- 17 Graft Harvest and Preparation** 129
Juan Carlos Monllau, Wolf Petersen, Christian Fink,
Sven U. Scheffler, Pablo Eduardo Gelber, and Christian Hoser
- 18 Tibial Bone Tunnel Placement (Arthroscopically
and with Fluoroscopy)** 147
Christophe Hulet, Goulven Rochongar, and Valentin Chapus
- 19 Femoral Bone Tunnel Placement (Arthroscopically
and with Fluoroscopy)** 159
Tim Spalding, Curtis Robb, and Charles H. Brown Jr.
- 20 Fluoroscopy for Bone Tunnel Placement** 181
Rainer Siebold and Hans H. Pässler
- 21 Bone Tunnel Drilling** 185
Wolf Petersen, Rainer Siebold, Bertrand Sonnery-Cottet,
Jacopo Conteduca, Pooler Archbold, Mathieu Thaunat,
and Pierre Chambat
- 22 ACL-Footprint Reconstruction with Insertion Site Table** 203
Rainer Siebold and Peter Schuhmacher

23	Tensioning of Grafts: Any Evidence?	209
	Sven U. Scheffler	
24	Fixation	215
	Giuseppe Milano, Wolf Petersen, Juergen Hoehner, Hans H. Paessler, Ralph Akoto, Vincenzo Campana, Maristella F. Saccomanno, and Rainer Siebold	
25	Remodeling of Hamstring Tendon Grafts After ACL Reconstruction	257
	Rob P.A. Janssen and Sven U. Scheffler	
26	Semitendinosus and Gracilis Tendon Regeneration Following Harvest	267
	Martina Åhlén, Mattias Lidén, and Jüri Kartus	
27	Long-Term Outcome of ACL Reconstruction	275
	Steven Claes, Rene Verdonk, Johan Bellemans, and Peter C. Verdonk	
 Part V Double Bundle ACL Reconstruction		
28	Double-Bundle ACL Reconstruction with Hamstrings	283
	Timo Järvelä and Rainer Siebold	
29	“Ribbonlike” Double-Bundle ACL Reconstruction with Restoration of “C”-Shaped Tibial Insertion Site	291
	Rainer Siebold	
 Part VI ACL Reconstruction with Extra-articular Stabilisation		
30	ACL Reconstruction with Extra-articular Plasty	299
	David Dejour, Stefano Zaffagnini, Panagiotis G. Ntagiopoulos, Alberto Grassi, Giulio Maria Marcheggiani Muccioli, and Maurilio Marcacci	
31	Extra-articular Augmentation of Anterior Cruciate Ligament Reconstruction: The Monoloop Procedure	317
	Cathal J. Moran, Peter C. Verdonk, Koen Lagae, and Geert DeClercq	
 Part VII ACL and Open Physis		
32	ACL Rupture with Open Physis	327
	Karl-Heinz Frosch, Romain Seil, Rainer Siebold, Franck Chotel, Shinya Oka, and Achim Preiss	
33	Bony Avulsion with Open Physis	347
	Elisabeth Abermann, Peter Gföller, Christian Hoser, and Christian Fink	

Part VIII One-Stage Revision

- 34 Systematic Approach from Porto School** 367
Hélder Pereira, Nuno Sevivas, Rogério Pereira,
Alberto Monteiro, Ricardo Sampaio, Joaquim Miguel Oliveira,
Rui Luís Reis, and João Espregueira-Mendes
- 35 One-Stage Revision: Danish Approach** 387
Martin Lind

Part IX Spongiosaplasty and Two-Stage Revision

- 36 ACL Two-Stage Revision Surgery: Practical Guide** 407
João Espregueira-Mendes, Hélder Pereira, Alberto Monteiro,
Joaquim Miguel Oliveira, Rui Luís Reis, Pedro Luís Ripóll,
and Neil Thomas
- 37 Bone Harvest from Iliac Crest and Bone Tunnel Filling** 419
Rainer Siebold and Hans H. Pässler

Part X ACL + Osteotomy

- 38 Surgical Technique** 425
Pedro Pessoa
- 39 Results of Combined High Tibial Osteotomy (HTO)
and ACL Reconstruction** 441
Christophe Hulet, Aude Sebilo, and Sylvie Collon

Part XI Intraoperative Complications

- 40 Intraoperative Complications: Solutions?** 449
Mohsen Hussein

Part XII Postoperative Complications

- 41 Postoperative Complications: Solutions?** 463
Jüri Kartus, Francis Fernandez, and Rainer Siebold

Part XIII Rehabilitation and Prevention

- 42 Rehabilitation and Return to Sports** 477
Amelie Stoehr, Hermann Mayr,
Barbara Wondrasch, and Christian Fink
- 43 Prevention of ACL Tear and Rerupture** 489
Amelie Stoehr, Barbara Wondrasch, and Hermann Mayr

- Index** 497