

INSALL - SCOTT

膝关节外科学

SURGERY *of the* KNEE

第3版

主译 吕厚山

下 卷

人民卫生出版社

INSALL · SCOTT

膝关节外科学

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第3版

下卷

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John N. Insall, MD & W. Norman Scott, MD

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译 者 序

记得3年前，人民卫生出版社姬放主任找我征求翻译《膝关节外科学》是否有价值的时候，我曾毫不犹豫地对她：“这绝对是一本有价值的好书。如果能够翻译出版，一定会对我国膝关节外科事业的发展产生巨大的推动作用。”姬放主任是一位具有豪爽风格、说干就干的人。不久她就告诉我：出版社讨论决定购买此书的翻译权，并希望我们组织一个有志于翻译此书的班子。后来由于这本书原来的出版社被另一家出版社合并，版权费一下子增加了许多。她又找我商量，这本书是否值得花这么多钱来购买翻译权时，我犹豫了，这种犹豫并不是因为该书本身的价值，更深的层面是对自己的组织能力没有信心。花那么多钱买来的版权，如果翻译不好，不能被广大同行所接受，不仅仅是浪费了出版社的经费，更重要的是败坏了这本膝关节外科学领域的“圣经”般名著的声誉，责任太大了。但如果此书不能被译成中文同我国广大同行见面，这对我们同样是一个损失。听说后来经过出版社的多方努力，版权费又恢复到原来的水平，姬放主任再次找我，我再次与北京积水潭医院张洪教授和我们关节病研究所的几位年轻同道一起讨论，特别是征求了我的老师冯传汉教授的意见，大家几乎都异口同声地支持翻译出版此书。就这样，我怀着既兴奋又担心的心情开始了这项工作。

参与翻译工作的医师们，都是在关节外科领域里有长期工作经验的中青年医师。根据他们既往工作的经验和兴趣，分配了每个人的翻译章节，对其中个别拿不准的章节，我们拿出几节请冯传汉教授斟酌。大家都知道冯传汉教授是一位非常认真的学者，每送上

一节，冯老师都要反复推敲修改，看着上面密密麻麻的修改字迹，我的心情是非常矛盾的。高兴的是，冯老师的业务和英文的功底是人所敬仰的，经过他的斧正，这个章节就可以放心了；但心痛的是让91岁高龄的冯老师这么操劳，心里有愧啊！今天，在我们读这本书的时候，我们不仅要学习书中的知识，分享大师们的经验，指导我们的工作；同时，还要学习冯传汉老师认真为人做事的精神。他总是鼓励后人勇挑重担，又身体力行帮助后人。当你遇到问题去向他求教时，他总是那么认真、及时地帮助你，能够在这样的老师指导下工作，这是我们终生的幸福。

承担翻译工作的中青年医师们不仅是临床工作的骨干，也是家里的“掌门人”。他们都是牺牲自己那点有限的休息时间来完成这项工作的，字里行间浸透着他们的心血和汗水。由于每个人的中英文水平不尽相同，工作经验和体会也有差别，谬误之处实在难免，在恳请读者谅解的同时，更希望大家能将不当及谬误之处及时指出，只有这样才能保持这本名著的真实面貌，以使再印时得以及时修正。

在这里，我要特别感谢关振鹏副教授，他在这本书的翻译过程中，在校对、补漏、催稿等方面默默地帮助我做了大量的工作。有个别被人遗漏的章节，又是他承担了补译的工作。可以说，没有他的帮助，我很难顺利地完成此项重任。

如果说航海离不开航标的话，我想《膝关节外科学》就是膝关节外科事业的一盏耀眼的引航明灯。相信读者们一定能感觉到在分享书中经验之后，对自己事业的巨大帮助。

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2005年6月14日

➤ 英文版序言

25年前,患有膝关节疼痛的青少年,在制动不能缓解症状并继发肌肉萎缩和渐增无力的情况下,常实施了完全不必要的开放性半月板切除手术。有些病人术前还做过确诊率很低的膝关节造影。

术后,如果症状持续,残留的另侧半月板则被认定为致病根源,于是上述的治疗再被不成功地重复一次。随着半月板切除术的失败,人们则认为髌骨是导致一系列膝关节问题的“罪魁祸首”。遗憾的是,没有一种保守疗法或是手术能较彻底地解决膝关节问题。人们先后采用近端、远端再对线(位)手术治疗各种各样的“软骨软化症”。如果诊断有前交叉韧带损伤,治疗方式更是种类繁多,从任其自然发展直到关节内、外联合重建。用现代眼光来看,能从上述治疗方法中获得康复,诚然是对病人和医者共同努力的赞扬,但同时也有几分告诫,即避免手术治疗。

不幸的是,许多膝关节疾患最终发展成非甾体抗炎药治疗无效的创伤后关节炎,从而需要接受截骨治疗。今天看来,许多膝部截骨手术可能没有适应证,然而当时并无其他手术可供选择。当前,随着临床诊断、影像技术、康复方式的进步及对之深刻的理解,排除了许多不必要的手术。关节镜技术使关节软骨病变、韧带损伤的诊断及治疗发生了革命性的更新。与此同时,全膝关节置换在缓解疼痛与改善活动能力方面,取得了无与伦比的成功。

我深信,对前25年的回顾,在一定程度上提示我们如何审视经典教科书在医学继续教育中所起的作用。现在,我们进入了数字时代,由于数字千年的到来,因此在我们努力提高教育带给病人新突破性治疗的时候,更加难以容忍模拟信号出版物的匮乏与落后。有鉴于此,我们试图编撰两卷兼容并包并带有彩页的教科书,以弥合模拟信号与数码信号出版间的差距。在结合以前两部膝关节专著——《Surgery of the Knee》、《The Knee》——的基础上,我们再次邀集国内、国际享誉膝关节外科领域专家所论述之大成。

本书由11篇、95章构成。第一篇为基础科学部分,阐述了膝关节解剖、解剖变异、影像学与手术入路等内容。

在膝关节生物力学部分(第二篇),Michael Free-

man博士通过一系列深入的MRI对照研究,切实提高了我们对膝关节运动的认识。该部分的其他内容强调了膝关节生物力学的基础原则和膝关节与正常或异常步态的关系。

膝关节外科专业建立伊始,关节软骨缺损的修复就引起了骨科医生的注视,当前热情似乎空前高涨。因此,本书几乎囊括了国际上相关方面知名创始者处理软骨缺损的技术。从欧洲到美国,基于学者们所打下的基础,有望在未来岁月中取得临床应用的成功。

本书的作者多达150多位,难以一一枚举其精粹之处。要指出的是,本书的若干章节极具创新性。如:第41章(前交叉韧带重建翻修术:作者的观点)向读者一步一步地展现了多位专家处理这一骨科手术难题的珍贵心得。

娱乐性运动近年来倍受重视,儿童膝关节问题也显得越来越突出。第64章至第68章为读者提供了向儿童骨科专家学习骨骼系统的正常生长与发育、先天畸形、骨骺骨折、儿童前交叉韧带损伤的处理等内容的机会。

本书的近四分之一篇幅用于论述人工膝关节置换及其他手术选择。鉴于人工膝关节置换术的良好疗效,如此安排是有必要的。但是,我们不能忘记截骨术的重要作用,感谢Hanssen与Poilvache两位医生,他们向读者介绍了欧洲与美洲学者有关的观点与展望。本书对人工膝关节的假体设计、置换方法、血栓性静脉炎与皮肤愈合等问题(第七篇),感染及需行翻修术的并发症等都有详细论述。正如前交叉韧带的翻修一样,人工全膝关节翻修术用了六节来讨论。作者们提供的多种解决问题的途径和“诀窍”是无价的。

能与我的导师、合作者,更重要的是朋友们共同协力出版此巨著,我深感荣幸。Insall医生先前关于膝关节外科各个领域的著作达到了难以逾越的高度。对我来讲,过去的两年中能在他的指导下继续我的“住院医师训练”更是无比珍贵的机会。

最后,谨代表所有作者,殷切期望读者们能从本书得到启发,积极学习,认真分析观察到的诸多现象,细心思考膝关节外科领域内的各种问题,为本学科作出贡献,造福于广大患者。

➤ 英文版前言

从根本上说，由于《膝关节外科学》第3版融合了 Norman Scott 博士编著的《膝关节》的内容，所以本书第3版不同于第1版和第2版。这种变化给我们灌输了新的思想，也许能使本书更加与新时期的进展息息相关。我们特别增加了“作者的观点”章节，介绍许多知名专家的手术经验；还有 Henry Clarke 博士编写的“膝关节解剖学”新章节。

关于新内容与旧内容混合编写的效果：例如，Michael Freeman 博士编写了“关节炎的外科病理学”所谓的“经典”章节（关节炎的病理学毕竟是经久不变的）；他还基于最近解剖学研究的新观点，编写了关

于膝关节怎样运动的全新章节。对于大多数读者来说，我相信这是发人深思的。

另外，本书的新意还包括增加了一些彩图。我期望这会使页面增色并给读者带来阅读兴趣。

本书还进行了大刀阔斧的删节，删去了第1版中的部分内容（遗憾的是，其中大多是我自己写的），这也使本书获益匪浅。

非常荣幸能与我的老朋友和同事 Norman Scott 博士共事，正是由于他的高涨热情和倾力工作才使本书及时出版，这样确保了本书所有内容都尽可能是与时俱进的。

John N. Insall, MD

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67: *Physal Fractures About the Knee*

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8: *Basic Biomechanics*

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46: *Disorders of the Patellofemoral Joint*

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19: *Treatment of Juvenile Osteochondritis
of the Knee*

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Professor, Dept. of Bioengineering,
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University of Iowa Hospital and Clinics,
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92: *Knee Arthrodesis and Resection
Arthroplasty*

S. TERRY CANALE, MD

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University of Tennessee,
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65: *Congenital Deformities of the Knee*

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25: *Arthroscopic Meniscal Repair*

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43: *Posterior Cruciate Ligament Injuries*

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2: *Anatomy*
3: *Anatomic Aberrations*
73: *Historical Development, Classification,
and Characteristics of Knee Prostheses*

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83: *Thrombophlebitis in Knee Arthroplasty*

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89: *Extensor Mechanism Disruption After
Total Knee Arthroplasty*

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2: *Anatomy*
24: *Arthroscopic Meniscal Resection*
34: *Anterior Cruciate Ligament
Reconstruction With Bone-Patella
Tendon-Bone Autograft: Indications,
Technique, Complications, and
Management*
59: *Soft-Tissue Considerations About the
Knee: Prevention and Treatment of
Problems*

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85: *Partial Denervation for the Treatment
of Painful Neuromata Complicating
Total Knee Replacement*

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UCHSC,
Medical Director,
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Research Laboratory,
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78: *Fluoroscopic Analysis of Total Knee
Replacement*
93: *Revision Knee Arthroplasty: How I Do
It*

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Charlottesville, VA
62: *Fractures of the Patella*

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93: *Revision Knee Arthroplasty: How I Do
It*

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Sciences Centre,
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91: *Cement Spacers in Knee Surgery*

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Durham, NC
24: *Arthroscopic Meniscal Resection*
48: *Quadriceps and Patellar Tendon
Disruptions*
74: *Surgical Techniques and
Instrumentation in Total Knee
Arthroplasty*
80: *Meniscal-Bearing Knee Replacement*

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21: *Spontaneous Osteonecrosis*

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93: *Revision Knee Arthroplasty: How I Do
It*

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82: *Transfusion Considerations in Total
Knee Arthroplasty*

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57: Pain Management in Knee Surgery

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49: Inflammatory Arthritis of the Knee

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*10: The Shapes and Relative Movements of
the Femur and Tibia in the Unloaded
Cadaveric Knee: A Study Using MRI as
an Anatomical Tool*
69: Surgical Pathology of Arthritis

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*35: Arthroscopic Anterior Cruciate
Reconstruction With Hamstring
Tendons: Indications, Surgical
Technique, Complications, and Their
Treatment*

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*58: Gene Therapy in Treatment of Knee
Disorders*

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*47: Surgery of the Patellofemoral Joint:
Indications, Effects, Results, and
Recommendations*

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Nerve Injury,
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*53: Complex Regional Pain Syndromes,
Types I (Reflex Sympathetic Dystrophy)
and II (Causalgia)*

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*20: Osteochondritis Dissecans II: The Adult
Form*

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4: Imaging of the Knee
*94: Bone Tumors and Tumor-Like Lesions
of the Knee*

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*38: Anterior Cruciate Ligament
Reconstruction for Chronic Injuries*

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27: Meniscal Allograft Transplantation

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31: Sports Knee Rating Systems

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67: Physeal Fractures About the Knee

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*42: Newer Concepts in the Treatment of
Posterior Cruciate Ligament Ruptures*

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91: Cement Spacers in Knee Surgery

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14: Mosaicplasty

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*70: Osteotomy About the Knee: American
Perspective*
*92: Knee Arthrodesis and Resection
Arthroplasty*

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83: Thrombophlebitis in Knee Arthroplasty

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6: Neurophysiology of the Knee
44: The Dislocated Knee

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*93: Revision Knee Arthroplasty: How I Do
It*

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*95: Bone and Soft-Tissue Tumors Around
the Knee*

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*60: Supracondylar and Distal Femoral
Fractures*
61: Tibial Plateau Fractures

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1: *Evolution and Embryology of the Knee*

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58: *Gene Therapy in Treatment of Knee Disorders*

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22: *Osteonecrosis of the Knee*
28: *Nonoperative Treatment of Knee Arthritis*
85: *Partial Denervation for the Treatment of Painful Neuromata Complicating Total Knee Replacement*

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28: *Nonoperative Treatment of Knee Arthritis*

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12: *Articular Cartilage Biology and Biomechanics*

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32: *Medial and Lateral Ligament Injuries of the Knee*

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2: *Anatomy*

3: *Anatomic Aberrations*

46: *Disorders of the Patellofemoral Joint*

73: *Historic Development, Classification, and Characteristics of Knee Prostheses*

74: *Surgical Techniques and Instrumentation in Total Knee Arthroplasty*

77: *Total Knee Arthroplasty With Posterior Cruciate Ligament Substitution Designs*

80: *Meniscal-Bearing Knee Replacement*

87: *Complications of Total Knee Arthroplasty*

88: *Revision of Aseptic Failed Total Knee Arthroplasty*

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10: *The Shapes and Relative Movements of the Femur and Tibia in the Unloaded Cadaveric Knee: A Study Using MRI as an Anatomical Tool*

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36: *Anterior Cruciate Ligament Reconstruction With Semitendinosus*

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27: *Meniscal Allograft Transplantation*

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81: *Patellar Replacement in Total Knee Arthroplasty*

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82: *Transfusion Considerations in Total Knee Arthroplasty*

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45: *Dislocation of the Proximal Tibiofemoral Joint*

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6: *Neurophysiology of the Knee*
44: *The Dislocated Knee*

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66: *The Pediatric Knee—Evaluation and Treatment*

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78: *Fluoroscopic Analysis of Total Knee Replacement*

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55: *Anesthetic Considerations in Knee Surgery: The Ambulatory Patient*

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51: *Hemophilia and Knee Arthroplasty*

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6: *Neurophysiology of the Knee*

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21: *Spontaneous Osteonecrosis*

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21: *Spontaneous Osteonecrosis*

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34: *Anterior Cruciate Ligament
Reconstruction With Bone-Patella
Tendon-Bone Autograft: Indications,
Technique, Complications, and
Management*
41: *Revision ACL Surgery: How I Do It*

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57: *Pain Management in Knee Surgery*

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58: *Gene Therapy in Treatment of Knee
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91: *Cement Spacers in Knee Surgery*

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52: *HIV Infection and Its Relationship to
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2: *Anatomy*
4: *Imaging of the Knee*

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30: *Knee Laxity Testing Devices*
40: *Knee Bracing for Athletic Injuries*

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31: *Sports Knee Rating Systems*

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64: *Normal Growth and Development in
the Skeletally Immature Knee*

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33: *Anterior Cruciate Ligament
Reconstruction With Patellar Tendon
Graft*

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13: *Healing of Articular Cartilage Injuries*

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35: *Arthroscopic Anterior Cruciate
Reconstruction With Hamstring
Tendons: Indications, Surgical
Technique, Complications, and Their
Treatment*

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22: *Osteonecrosis of the Knee*
28: *Nonoperative Treatment of Knee
Arthritis*

85: *Partial Denervation for the Treatment
of Painful Neuromata Complicating
Total Knee Replacement*

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64: *Normal Growth and Development in
the Skeletally Immature Knee*

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90: *Infected Total Knee Arthroplasty*

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63: *Periprosthetic Fractures*

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42: *Newer Concepts in the Treatment of
Posterior Cruciate Ligament Ruptures*

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86: *Bone Graft, Wedges, and Augments in
Total Knee Arthroplasty*

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39: *Rehabilitation of the Surgically
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Cruciate Ligament*

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14: *International Experience With
Autologous Chondrocyte
Transplantation*

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44: *The Dislocated Knee*

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10: *The Shapes and Relative Movements of
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71: *Osteotomy for the Arthritic Knee: A
European Perspective*

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47: *Surgery of the Patellofemoral Joint:
Indications, Effects, Results, and
Recommendations*

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76: *Results of Posterior Cruciate-
Preserving Total Knee Arthroplasty*

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41: *Revision ACL Surgery: How I Do It*

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22: *Osteonecrosis of the Knee*

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76: *Results of Posterior Cruciate-
Preserving Total Knee Arthroplasty*

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16: *Débridement and Microfracture ("Pick
Technique") for Full-Thickness Articular
Cartilage Defects*

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16: *Débridement and Microfracture ("Pick
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Cartilage Defects*

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93: *Revision Knee Arthroplasty: How I Do
It*

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89: *Extensor Mechanism Disruption After
Total Knee Arthroplasty*

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Injuries*
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Technique, Complications, and
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45: *Dislocation of the Proximal
Tibiofibular Joint*
59: *Soft-Tissue Considerations About the
Knee: Prevention and Treatment of
Problems*

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75: *Unicompartmental Total Knee
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59: *Soft-Tissue Considerations About the
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