

第5版

尤曼斯

神经外科学

Youmans

Neurological Surgery

神经外科导论与肿瘤学

第1卷

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PREFACE

China has a distinguished history and tradition of medicine and increasing centers of excellence in neurosurgery. Thus, I am very pleased that Elsevier has created this special publication of the 5th Edition of Youmans Textbook of Neurological Surgery for China. I hope that my neurosurgical colleagues in China found the information in this edition helpful in providing care to their patients.

Neurological surgery is a dynamic field, but one that is built on and sustained by the broad shoulders of earlier scientific discoveries and clinical experiences. The fifth edition of *Neurological Surgery* reflects this ever-changing discipline and combines what is “new” with that which is not only “old,” but enduring. Thus, the latest volume reflects the breadth and complexity of neurosurgery at the beginning of the 21st century in China and elsewhere around the globe. This edition continues the original intent of the first¹ and subsequent texts edited by Julian Youmans.

This edition has been radically restructured to reflect the ever-changing nature of our discipline. The initial section is focused on the key basic science areas and associated clinical disciplines, the knowledge of which is a necessity for the rational practice of neurosurgery. Subsequent sections reflect the mixture of time-tested information and new advances in the areas of oncology, vascular system, epilepsy, functional, pain, pediatrics, peripheral nerve, radiation therapy and radiosurgery, spine, and trauma. Each section begins with a consideration of general features and historical background that allows the reader to place in context the advances within each section. There then follow chapters dealing with basic scientific information and advances relevant to each area, whereas the subsequent topics within each section deal with clinical advances and surgical techniques. Thus, in all sections, we have added a wealth of new horizontally and vertically integrated information.

The overall aim of each section reflects the unifying goal of the entire book: to provide comprehensive knowledge of disorders and surgery of the nervous system to the student, whether that “student” is a junior resident or an experienced practitioner. Moreover, I hope that future physicians dealing with surgery of the nervous system, whether they are mechanical or biological surgeons,² will value the information contained in this text.

It is self-evident that these volumes represent the diligent work of many individuals. I enthusiastically express my appreciation to the authors of each chapter, and the Section and Deputy Editors as well as the editorial staff of Saunders/Elsevier publication. Their collective contributions are truly the broad shoulders upon which future care and advances in Neurosurgery will stand.

H. Richard Winn, MD

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¹ Youmans JR: Neurological Surgery. Philadelphia, WB Saunders, 1973, pp xvii-xviii.

² Winn HR, Howard MA: The next 100 years of neurosurgery. *Lancet* 354(Suppl): 36, 1999.

中国具有辉煌的医学历史和传统,优秀的神经外科中心也不断涌现。因此,我非常高兴 Elsevier 出版公司将《尤曼斯神经外科学》这部专著的第 5 版在中国出版。我希望我的中国同行们能够在这本书中找到他们所需要的信息,对其患者提供帮助。

神经外科虽然是一个不断进展的专业领域,但也是一个建立并运行于早期科学发现和临床经验基础之上的专业。第 5 版《尤曼斯神经外科学》反映了这些变化,并将“新”的知识和“旧”的经历了时间考验而仍然有效的知识进行了结合。因此本书的最新版本反映了 21 世纪初期中国和全球各地神经外科发展的广度和复杂度。本版继续沿用了由 Julian Youmans 编辑的第 1 版和后续版本的最初宗旨。

本版在结构编排上进行了大胆重建,以反映我们这个学科的不断变化。开始的章节着重介绍基础研究和相关的临床内容,这些知识对于神经外科的临床工作非常重要。接下来的章节介绍了那些经过了时间检验的知识和新进展,这些新进展领域包括肿瘤学、血管系统病变、癫痫、功能性病变、疼痛、儿科、外周神经、放疗和放射外科学、脊柱和外伤等。每章开始都有让读者了解该章节进展的概述和背景资料介绍。后面是介绍基础学科资料和相关进展的章节,在这些章节中,次级标题介绍临床进展和外科技术。因此,在所有的章节中,我们都增加了横向和纵向的完整信息资料。

本书各章节的目标反映了整部书的统一目标:为读者,不论是低年资住院医师还是有丰富临床经验的医师,提供神经系统病变和外科手术的综合知识。当然,我也希望其他临床医师在处理神经系统外科手术时能够从本书中获得有用的信息。

很显然本书是许多人勤奋工作的结晶。我由衷地感谢各章节的作者,感谢 Saunders/Elsevier 出版社的代理编辑和他们的编辑团队。他们的集体贡献是未来治疗和神经外科学进步赖以前进的台阶。

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2008 年 12 月 5 日

现代神经外科是历史最短而发展最快的学科之一,比较普遍的看法是其于 19 世纪末才成为一门独立的学科,而在 20 世纪之初就已经有了较为完整的、系统的理论。

神经外科发展的早期充满了忧伤。而正是神经外科学家、神经病理学家及神经解剖学家忍受着痛苦与失败,不断地探索,才有新的诊疗技术不断涌现。尤其是最近 30 年以来,人类科学探索理论与研究技术有了长足的发展,随着不断地吸纳和应用各种新理论和新技术,神经外科学已经发展成为一门分支庞大的综合性学科。学科的发展越来越迅速,专业分工越来越精细,使得学术研究成果的记录、整理和传承越来越重要,也越来越复杂。

《尤曼斯神经外科学》的出版为神经外科学搭起了一座豪华的圣殿,而作者们在这座圣殿里奢侈地建造了 11 间美轮美奂的厅堂,包括神经外科导论、神经肿瘤学、脑血管病、癫痫、功能性神经外科、疼痛、小儿神经外科、脊髓外科、周围神经疾病、神经创伤与神经放射学,这部著作自 1973 年首次出版以来,历经 4 次再版修订。全书不仅注重对神经外科学的传统理论与学说的收集整理,还对基础医学和其他相关学科的进展进行了归纳、总结,尤其是这些学科给神经外科带来的改革、创新成果,包括新的理论学说、新的诊疗原则、新的科研与临床技术,书中都予以了翔实的阐述。弥足珍贵的是,这部著作还为读者带来了一片文献的海洋,收录了一个多世纪以来的所有经典论著。

我国的神经外科与新中国同命运,一直受到党和国家的高度关注,经过几代人的不懈努力,逐渐的发展、强大。我们现在的神经外科临床工作能与国际水准媲美;但我国人口众多,地域差别大,城乡差别大,优良的医疗资源匮乏。加快医师的培训和先进医疗技术的推广,提高医务人员的整体诊疗水平,已经成了当务之急。

以王任直教授为首的专家们这次翻译引进《尤曼斯神经外科学》,无疑为我国神经外科学界搬来了一座宝库。我相信,这部译著必将为提高我国神经外科医务人员整体水平做出贡献。



2009 年于北京

一个多世纪以来,神经外科学有了长足的发展。许多发达国家都有脑科学研究的长远计划。各国对神经系统结构、功能和保护的研究也都加大了投入,取得了许多具有创造性的成果。但神经系统是人体最为复杂的一个系统,我们目前所知实在是微乎其微。神经系统的结构、功能和保护研究正是方兴未艾,21 世纪神经外科研究领域将更加广阔,也更加复杂。

《尤曼斯神经外科学》是一部记录各国神经科学家研究成果与经验的经典巨著。它首先是一部世界医学界及神经科学界权威专家的经验总结。我粗略统计了一下,这部著作的作者来自全球 18 个国家,其中大部分来自美国、英国、德国、法国和西班牙等发达国家。许多作者都曾经取得过卓越的成就,具有非常丰富的经验,在国际上享有极高的荣誉。其次是这部著作内容非常全面,涉及了神经外科学的方方面面:集基础理论与临床应用于一身,既有传统神经外科知识的总结,又有最新研究成果的归纳。

记得我在美国学习时,当时去过的几个神经科学研究中心和医院神经外科的医师都在读这部著作。那时《尤曼斯神经外科学》还是第 3 版,内容已经非常丰富;印象尤其深刻的是其对新理论、新技术的介绍和海量的文献汇编,这对指导临床工作和撰写论文都有极大的帮助。近 20 年神经外科飞速发展,《尤曼斯神经外科学》经过 2 次再版,内容更加全面,所介绍的理论与技术也更加先进,是一部难得的案头参考书。

王任直教授组织一批国内的专家,将第 5 版《尤曼斯神经外科学》翻译成中文出版,这是我国神经外科学界的一件可喜可贺的大事。这部名著是一部全球神经外科学发展史,借鉴国际同行的经验,可以使我国神经外科发展少走弯路。全书兼顾基础与临床、传统与创新,相信不管是初窥门径的神经外科医师,还是已经取得成就的专家教授,都能从中获益。

赵继宗

2009 年于北京

历经四年,在数百名专家、教授和同道们的共同努力下,世界神经外科的经典巨著《尤曼斯神经外科学》的全部译文终于完成了,真是有种如释重负的感觉。记得22年前在日本学习时,发现那里的神经外科医师几乎每人都有《尤曼斯神经外科学》和《施米德克·斯威特神经外科手术学》,他们甚至经常带着这两套书到手术室去查阅解决所遇到的问题。我仔细阅读后受益匪浅,觉得确实是经典实用的好书,但因当时买不起,只能借来复印。1991年第一次去美国用积攒了几年的收入将这两套书买回来,希望能有机会译成中文,使更多的人受益。后来,在人民卫生出版社的帮助下,我们在2003年完成了《施米德克·斯威特神经外科手术学》的翻译工作并正式出版发行,受到广大神经外科同行们的好评。今天,《尤曼斯神经外科学》也即将出版,我多年的夙愿终于实现了。

在本书的编译过程中经历了千辛万苦,正是由于来之不易,回首往事需要感谢的人真是太多了。首先要感谢本书的译者朋友们,他们都是我的老师及同道,感谢他们在百忙之中抽出时间,耗费心血地艰辛编译,才使得这部巨著顺利完成;其次是感谢北京协和医院神经外科可爱的同事们,由于译文量巨大,翻译水平参差不齐,很多校对、审稿等细节工作都是他们加班加点完成的,尤其是杨众医生、邓侃医生、郭毅医生、高俊医生、李桂林医生和姚勇医生,如果没有他们是难以完成如此巨大的鸿篇巨著;还要感谢全国神经外科的同道们,每当开会或相聚时都会询问本书翻译进展情况,表达了他们对这套书的热切期盼,如果没有他们的鼓励我们也许坚持不到今天;还要感谢人民卫生出版社姬放主任和汪仁学编辑,是他们的努力使这部巨著引进中国,使我们能够有机会翻译出版;还要衷心感谢北京协和医院各位前辈、老师们的支持,使我一路顺利走来,是协和的“严谨、求精、勤奋、奉献”精神激励着我,我一直为能够成为“协和人”感到骄傲和自豪;在此更要感谢我的恩师尹昭炎教授、王维钧教授、任祖渊教授和苏长保教授,如果没有他们的教育和培养就没有我的今天,作为学生只有更加努力地学习和工作才能不辜负他们的培育之恩;还要感谢我的家人,无论是我的父母、还是妻子和女儿,一直在精神上、生活上及工作上给予我无私的关爱和支持;最后,还要感谢我的病人和家属,如果不是他们的极大信任,我们是难以取得今天这样的成绩的。总之,感激之情无以言表,唯有更加努力地学习和工作,回馈祖国、社会和人民。

《尤曼斯神经外科学》是传统理论和最新知识相结合的经典著作,它全面系统阐述了神经外科系统以及相关领域的知识与发展变化,反映了21世纪神经外科领域发展的广阔性和复杂性。本书作者都是世界医学及神经科学界的权威专家,已经在相关领域积累了丰富经验,因此书中很多内容都是他们自身工作经验的总结。由于密切结合实际情况需要,所以能够帮助我们解决很多临床遇到的实际问题。

本书第1卷的前半部分主要阐述神经外科的基本理论和临床规范,掌握这些知识是从事和开展神经外科工作所必需的。而在随后各个章节中,分别叙述了肿瘤学、血管病、癫痫、功能性疾病、疼痛、儿童神经外科、周围神经疾病、放射神经外科、脊柱以及创伤等内容。每一部分都从历史背景和疾病一般特征开始,而主要内容是临床进展和外科技术。由于本书涉及内容广泛,既有传统基础内容,又有最新研究进展,相信不管是刚刚入门的神经外科医师,还是已经学有所成的专家、教授,或者是相关的眼科、耳鼻喉科、骨科、儿科、疼痛科、肿瘤科、放疗科等医师,都会从中获益。

在临床工作中,当需要了解一些疾病或者是在书写论文时,我们常常愿意或需要查阅文献了解这些疾病的历史及诊断治疗发展过程。但从目前情况看,由于引用的文献五花八门,各家描述不一,给我们全面了解和掌握疾病知识带来困惑。本书恰恰是按照历史、流行病学、病因学、病理生理学等顺序来写的,省去了我们需要查阅大量文献才能找到重要资料 and 数据的很多麻烦,使我们使用起来更加得心应手。

由于本书内容广泛,译者较多,加之我们的水平有限,难免会出现各种各样的问题,希望广大同道及朋友予以指正。

最后,再次衷心感谢全书335章的每一位译者,他们的辛勤工作都将为中国未来神经外科的发展所铭记。

北京协和医院神经外科
王任直

神经外科是一个具有创造性的领域,但每一位杰出的神经外科医生的工作又都与前人的科学实验和临床实践有着密不可分的联系。第5版《尤曼斯神经外科学》正是这种知识传承的总结,即旧的传统的新知识和新知识的结合。这一新的版本是 Julian Youmans 教授前面几部著作的延续,它反映了21世纪初神经外科领域发展的广阔性和复杂性。

为了反映出我们不断更新的知识 and 理念,本版著作在编写上与前几部有较大的改动。其中,第一部主要阐述神经外科的基本理论和临床规范,掌握这些是科学合理地进行神经外科工作所必需的。而随后的几部则既有历史的回顾又有新的进展,分别叙述了肿瘤学、血管病、癫痫、功能性疾病、疼痛、儿童神经外科、周围神经疾病、放射神经外科、脊柱以及创伤等内容。每一部分从疾病一般特征和历史背景开始,使读者能够置身于衔接和进展中,随后的章节针对基础科学信息和每个领域的进展,而每部分的主题内容是临床进展和外科技术。因此,在所有章节中,我们增加了大量新的横向和纵向整合的信息。

每部分的总目标都是为了反映整本书的理念:为读者们提供神经系统疾病和手术的全面知识,包括初级住院医师和有经验的医生。此外,无论是生物学外科医生还是技术型外科医生,我希望未来进行神经外科手术的医生能够珍惜本书中的内容。

不言而喻,这些书卷体现了很多人的辛勤工作。我十分感谢每一位编委,他们付出了大量的时间和精力,他们是 Roy Bakay(功能疾病),Henry Brem(肿瘤学),Kim Burchiel(疼痛),Bill Friedman(放射疗法和放射神经外科),Sean Grady(创伤),Michel Kliot(周围神经总论),Dade Lunsford(放射疗法和放射神经外科),Joel MacDonald(special features),Larry Marshall(创伤),Marc Mayberg(special features),Fred Meyer(血管病),T.S. Park(小儿神经外科),Ray Sawaya(肿瘤),Michael Scott(小儿神经外科),Dan Silbergeld(癫痫),Volker Sonntag(脊柱),Robert Spetzler(血管病),Dennis Vollmer(脊柱)。还要特别感谢我长期的合作者和伙伴,责任编辑 Ralph Dacey。

这样规模的工作要取得成果需要专业和勤奋的编辑工作,因此我要感谢 Saunders/Elsevier 小组的成员:发行商, Richard Lampert 和 Richard Zorab; 执行编辑, Anne Snyder 和 David Orzechowski; 项目经理, Jodi Kaye。特别要感谢的是,在整个过程中,我的助理编辑 Margaret Connelly 做出了重要和卓越的贡献。

作为个人的感谢还包括我的妻子,我们的女儿和儿子以及他们的伴侣,感谢他们对我一贯的支持和鼓励。

最后,衷心地感谢全书335章的每一位作者,他们的辛勤工作都将为未来神经外科的发展所铭记。

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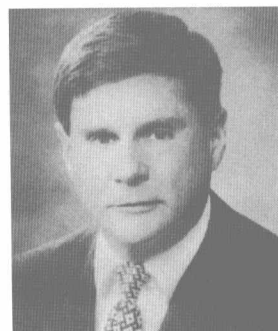
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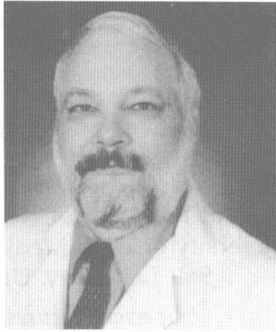
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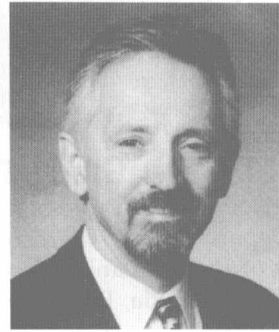
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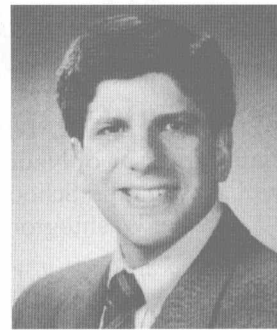
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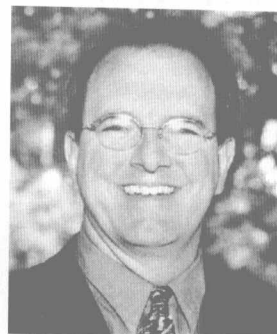
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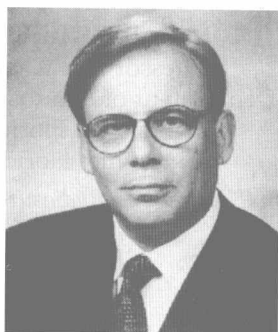
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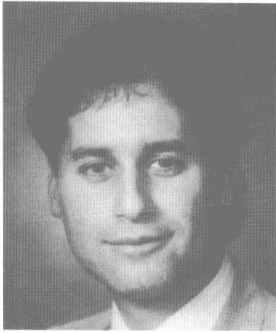
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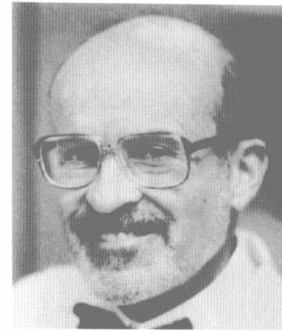
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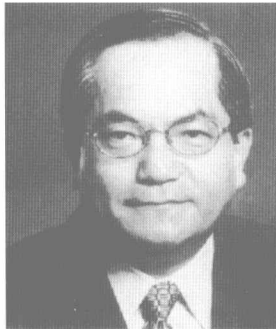
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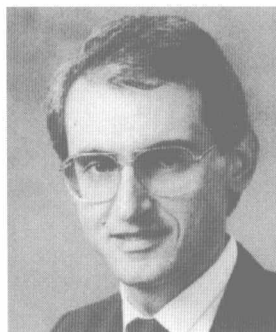
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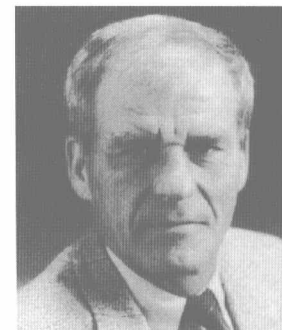
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Bone Metabolism as It Relates to Spinal Disease and Treatment

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Meningiomas

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Patient Selection in Movement Disorder Surgery; Brainstem Gliomas

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Carotid Angioplasty and Stenting: Interventional Treatment of Occlusive Vascular Disease; Basilar Trunk Aneurysms

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Low-Grade Gliomas: Astrocytoma, Oligodendroglioma, and Mixed Gliomas

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Basilar Apex and Posterior Cerebral Artery Aneurysms

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Pallidotomy for Parkinson's Disease

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Carotid Angioplasty and Stenting: Interventional Treatment of Occlusive Vascular Disease; Traumatic Carotid Injury

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Meningiomas

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Intracranial Internal Carotid Artery Aneurysms

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Ventricular Tumors; Vagus Nerve Stimulation for Intractable Epilepsy

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Differential Diagnosis of Altered States of Consciousness

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Cerebral Lymphoma

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Ventricular Tumors; Vagus Nerve Stimulation for Intractable Epilepsy

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Basilar Apex and Posterior Cerebral Artery Aneurysms

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Orbital Tumors

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Brain Death; Diagnosis and Management of Seventh and Eighth Cranial Nerve Injuries due to Temporal Bone Fractures

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Cerebral Blood Flow and Metabolism

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Endovascular Management of Brain Arteriovenous Malformations

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Low-Grade Gliomas: Astrocytoma, Oligodendroglioma, and Mixed Gliomas; Hemangioblastomas of the Central Nervous System; Interstitial and Intracavitary Irradiation of Brain Tumors

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Brain Tumors: General Considerations; Basic Principles of Cranial Surgery for Brain Tumors

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