

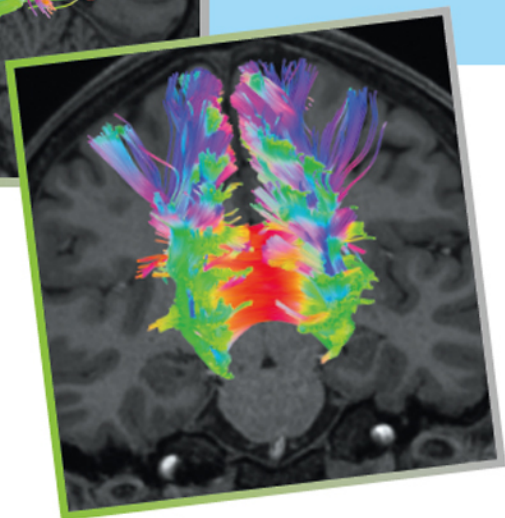
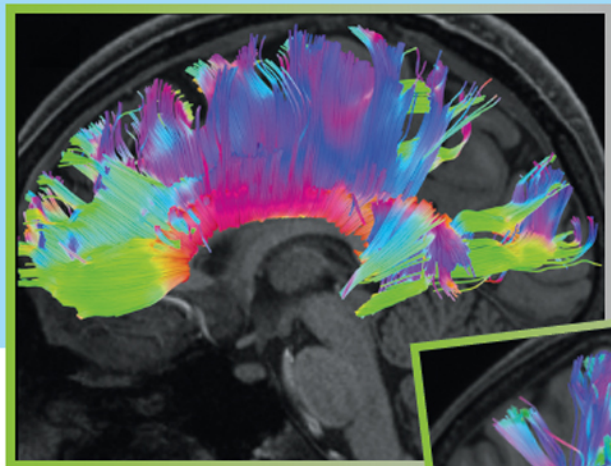
# Neurosurgery Oral Board Review

Third Edition

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Thieme







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## Third Edition

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*I would like to dedicate this book to Mr. Alberto Giorgio Denny Rothschild. He is the distinguished father of my best friend Gary and served as a second father to me after my father passed away in early childhood. His combination of intensity and compassion fit well with my dream of becoming a neurosurgeon. I studied for my medical boards in his suburban basement far from the distractions of my own apartment in the city of Chicago and his entire family has always been an excellent support system for me and my family.*

Jonathan S. Citow





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## Preface to the Third Edition

*Neurosurgery Oral Board Review, Third edition* is a substantial update to an already existing excellent resource for preparation of American Board of Neurological Surgery (ABNS) oral examination. Due to recent advances in the field of neurosurgery, the practices of neurosurgery have drastically transformed, and so is the format of the exam. In order to stay up to date and closely mirror the content and style of the exam, we have updated significant portions of the book from the second edition and added 80 new practice cases in oral board format. These cases are self-interactive, that is, they allow you to read the patient presentation/imaging and practice by giving your response to the case. We have also added sample responses to situations that you can refer to if needed. Every operative case will also describe a complication or event and ask you to describe how you would deal with that

situation. Again, you can practice your response, or refer to our sample answer if you are stuck. Each case includes a list stating other potential complications (for further practice) and a short list of references should you want to pursue more in-depth literature on the topic from Thieme's MedOne Neurosurgery resource.

We truly hope that this updated version is a valuable resource for quick review and test practice for the real oral board examination. Practicing multiple cases and varying complications should help ease some of the pre-test anxiety and give you the right blend of confidence needed to pass the test and put the neurosurgery oral board examinations behind you for good!

*Jonathan S. Citow, MD, FACS  
Robert J. Spinner, MD  
Ross C. Puffer, MD*

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## Preface to the Second Edition

I wrote this book using the notes that I scribbled down while studying for the neurosurgery oral board examination. This book is not intended to serve as a replacement for classic neurosurgical texts, but as a supplement to the knowledge gained during the long years of residency and in the early stages of practice. I tried to focus on the major aspects of diseases that a neurosurgeon may encounter, both in clinical practice and on the examination. For a more thorough helping of knowledge, consider thumbing through the texts in the reference list. My favorite is *Comprehensive Neurosurgical Board Review (Third Edition)*, but I may be a little biased. That book was geared for the written boards, but the anatomy, pathology/radiology, neurology, and neurosurgery sections provide useful information that is not covered in this text.

I must admit that I was a tad intimidated by the oral examination before I lived through it.

I expected to hear “So, Dr. Citow, can you please show me the incision for the hypoglossal-pandental nerve anastomoses used for people who constantly speak out of their asses.” But it really was a fair test and a surprisingly pleasant experience. I truly got the sense that the examiners are out to reinforce their preconceived notion that the examinee (you) is indeed competent—not the other way around—and makes reasonable decisions. They are not out to trick you with obscure details. Stay relaxed and suggest exactly what you would do in everyday practice (not in a surreal ivory tower university setting) and all will be fine. The only disheartening aspect of the test is that none of the examiners smile (but this may be their baseline state) or acknowledge that you are correct (but neither do your patients in the hospital, unless they have been on the Internet).

Good luck!

# Introduction

Relax, there is little the examiners will ask you that you have not treated successfully numerous times. Remember, this book is only our view of things. There are many ways to skin a nerve root. As long as the patients are well cared for, all will be fine. In this third edition, we have kept true to the major *purpose* of the first successful edition, that is, to serve as a *concise and easy-to-read* review book that can basically be covered in a few days as a *supplement* to additional study. We don't advocate preparing for the boards in one weekend, but the nature of our profession often requires quick reviews. Nevertheless, we have made several changes in this edition that will greatly enhance your preparation. Sections and chapters are reorganized into topics to better follow the format of the real examination. We have added to the end of each chapter some key helpful hints. In addition, we have added a quick reference section, new images, and an expansive case preparation section comprising 80 cases. These cases will allow you to practice individual cases in oral board format and formulate your responses to questions. They also provide basic guidance on safe treatment strategies. There are references for further reading if you want to dive a little deeper into the pathology and treatment strategies for a given pathology.

Because of the nature of the oral board examination, success clearly depends on confidence, which depends on knowing what to expect. Understanding the conditions will help reduce anxiety and improve success. The American Board of Neurological Surgery (ABNS) states that the purpose of the examination is to "determine competency in diagnosis and management;" however, it also explicitly states that the examination "focuses on problems neurosurgeons can expect." We would argue that this latter acknowledgment should receive as much if not more attention than the former during your preparation. Yes, you must know the basics in diagnosing and managing diseases of the nervous system, but the ABNS wants to make sure you are a safe neurosurgeon and that you avoid and appropriately manage complications. Most examinees will have recently completed residency and written board exams, so the basic knowledge of diagnosis and management is there and simply need review. However, many examinees lack extensive practical

experience of dealing with complications. Regardless of your experience with complications, you must demonstrate to the ABNS that you have solid complication avoidance skills.

The basic format of the oral examination has not changed for years. It only lasts for three hours. The first hour is based on basic neurosurgery (cranial and spine trauma, basic emergency department evaluation and management, such as subdural hematomas and acute spinal cord injury). The second hour is dedicated to more focused examination in a given specialty field, such as complex spine or vascular neurosurgery. The third hour is dedicated to your submitted case list. During each hour, you will meet two examiners who are mostly leaders in neurosurgery. Do not expect them to ask you questions in their field of expertise, outside of the hour of subspecialty focus. Typically, you will be presented a case history with symptoms and physical exam findings via a PowerPoint slideshow, and then you will be asked how you would proceed. You must formulate a differential diagnosis and then be prepared to discuss how you would work up each diagnosis. As you do this, the examiners will give you results that will guide you to the most likely diagnosis. At this time you must be prepared to discuss in detail your medical and surgical treatment options. There will be paper and cranial and spine models in the room that you can use. Once you demonstrate your knowledge of treatments, the examiners will likely interrupt you to proceed on to something else, for example, postoperative management of a complication.

Time is of essence! It is paramount that you practice the real situation to get used to this very short and fast exam. Being comfortable with the relatively fast format will greatly help you. The exact scoring system is not discussed in detail in the ABNS literature, so we are unsure of the methodology. However, members of the ABNS have reviewed it at the American Association of Neurological Surgeons (AANS) annual meeting sessions devoted to this topic. Basically, each case is scored between 0 to 4 in areas of diagnosis, management, and complications. The "passing" average likely changes each year based on the performances in that year. Achieving a particular score does not appear to be the key; instead, what

has been repeatedly emphasized is that you cover at least 6 cases per hour to accumulate enough points to achieve the passing score. This equates to only 10 minutes per case. We have found through our own experiences and teaching review courses that most folks are woefully unsatisfied with how much they discuss a case in 10 minutes. You will likely not say every important fact that the examiner is looking for about a particular case in 10 minutes, but you can let the examiner know that you know a lot about a particular case's diagnosis and management. You achieve that by talking. Think quickly, and then say what's on your mind. You will lose valuable time if you wait for the examiner to ask you a question. Instead, let the examiners interrupt you and redirect the discussion where they want—this is in your best interest.

Most people tackle this examination differently, but over the years we have accumulated some advice that seems to come up consistently from recent examiners:

1. Apply to ABNS to sit for oral exam as soon as you can after accumulating appropriate practice data after residency. The day after completion of your residency may be the smartest day of your life, and it will be helpful to do your oral exam as close to this day as possible. Once you apply, it will take many months for them to schedule your exam.
2. Gather review materials months ahead, but give yourself a dedicated 1 to 2 weeks off work before the exam to really focus on it.
3. Practice the exam, especially with senior colleagues or at review courses. This may be awkward for some, so you need to get over it and practice.
4. Spend the night near the testing site, so you can arrive very early, get familiar with the setup, and relax.
5. Review your submitted practice data and expect questions about it.
6. During the exam, you will be provided with paper and pencil, but taking extensive notes may slow you down, so be judicious if you need notes. We recommend not taking notes.
7. If you know the examiner, forget his or her specialty as you will most likely be asked questions from outside that specialty.
8. Don't guess. If you don't know, say so, but recommend how you might go about getting an answer. If you don't do a certain technique, say so, and tell them what you do in the real world (e.g., send patients to your cerebrovascular neurosurgery colleague). *But*, you will still be expected to discuss the basic craniotomy for clipping a particular aneurysm. Consults are wise, but typically not available during your exam! The assumption is that you should be able to deal with any basic neurosurgery issue if you had to.
9. Be humble. A reasonable assumption is that arrogant and overly self-confident neurosurgeons make deadly mistakes. No matter how well you discuss cases, we suspect this type of attitude will be significantly penalized.
10. Lastly, our knowledge of neurosurgery and educational methods are constantly evolving, as is the field of neurosurgery. We would encourage you to use this book as a broad overview of topics and test prep while using more focused resources for intensive review as you need.

Best of luck!

## Suggested Readings

- Youmans Neurological Surgery*. Winn HR. Philadelphia, PA: Elsevier–Health Sciences Division, 2010.
- Handbook of Neurosurgery, 9th Edition*. Greenberg MS, New York, NY: Thieme Medical Publishers, 2020.
- Adams and Victor's Principles of Neurology, 9th Edition*. Ropper A, Samuels M. New York, NY: McGraw-Hill Professional, 2009.
- Comprehensive Neurosurgery Board Review, 3rd Edition*. Citow JS, Macdonald RL, Puffer RC, Khalid SI, Carter BS, Cohen AR, Spinner RJ, Refai D. New York, NY: Thieme Medical Publishers, 2020.

The following journals were referred for information:

- Journal of Neurosurgery*  
*Neurosurgery*  
*Surgical Neurology*

# Part 1

## Spinal Disorders

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