

American Board of Surgery In-Training Examination

THE JOHNS HOPKINS

# ABSITE Review Manual

约翰·霍普金斯

美国外科学会住院医师培训考试  
习题与分析

第2版

Robert A. Meguid  
Kyle J. Van Arendonk  
Pamela A. Lipsett

Johns Hopkins University School of Medicine, Department of Surgery

- ✓ Two full-length practice exams with 225 questions each
- ✓ Based on actual key words from recent ABSITEs
- ✓ High-quality questions and discussions by leaders in their fields
- ✓ Includes key figures and tables with up-to-date cancer staging and treatment algorithms for many of the questions



北京大学医学出版社



JOHNS HOPKINS  
MEDICINE  
SCHOOL OF MEDICINE



Wolters Kluwer  
Health

American Board of Surgery In-training Examination

# THE JOHNS HOPKINS ABSITE Review Manual

## 约翰·霍普金斯 美国外科学会住院医师培训考试 习题与分析

(第2版)

原著

**Robert A. Meguid, MD, MPH**

Assistant Professor of Surgery

Division of Cardiothoracic Surgery

Department of Surgery

University of Colorado

School of Medicine

Aurora, Colorado

**Kyle J. Van Arendonk, MD, PhD**

Halsted Resident

Department of Surgery

Johns Hopkins University

School of Medicine

Baltimore, Maryland

**Pamela A. Lipsett, MD, MHPE, FACS, FCCM**

Professor of Surgery, Anesthesia and Critical Care Medicine, and Nursing

General Surgery and Surgical Critical Care Program Director

Co-Director of the Surgical Intensive Care Units

Department of Surgery

Johns Hopkins University

Schools of Medicine and Nursing

Baltimore, Maryland

北京大学医学出版社

Peking University Medical Press

## 图书在版编目 (CIP) 数据

约翰·霍普金斯 美国外科学会住院医师培训考试习题与分析:

第2版: 英文 / (美) 麦桂德, (美) 阿伦敦克, (美) 立普塞特编. —北京:  
北京大学医学出版社, 2014. 8

书名原文: The Johns Hopkins ABSITE Review Manual  
ISBN 978-7-5659-0887-3

I. ①约… II. ①麦… ②阿… ③立… III. ①外科-  
疾病-诊疗-美国-培训-教材-英文 IV. ①R6

中国版本图书馆 CIP 数据核字 (2014) 第 144377 号

北京市版权局著作权合同登记号: 01-2014-4139

Robert A. Meguid, Kyle J. Van Arendonk, Pamela A. Lipsett; The Johns Hopkins ABSITE Review Manual second edition  
ISBN: 978-1-4511-7332-1

Copyright©2014 by Lippincott Williams & Wilkins, a Wolters Kluwer business.  
All Rights reserved.

This is a reprint under copublishing agreement with Lippincott Williams & Wilkins/Wolters Kluwer Health, Inc., USA  
本书限在中华人民共和国境内 (不包括香港、澳门特别行政区及台湾) 销售。  
本书封底贴有 Wolters Kluwer Health 激光防伪标签, 无标签者不得销售。

本书提供了药物的准确的适应证、副作用和疗程剂量, 但有可能发生改变。读者须阅读药商提供的外包装上的用药信息。作者、编辑、出版者或发行者对因使用本书信息所造成的错误、疏忽或任何后果不承担责任, 对出版物的内容不做明示的或隐含的保证。作者、编辑、出版者或发行者对由本书引起的任何人身伤害或财产损失不承担任何法律责任。

## 约翰·霍普金斯 美国外科学会住院医师培训考试习题与分析 (第2版)

编写: Robert A. Meguid, Kyle J. Van Arendonk, Pamela A. Lipsett

出版发行: 北京大学医学出版社

地址: (100191) 北京市海淀区学院路 38 号 北京大学医学部院内

电话: 发行部: 010-82802230; 图书邮购: 010-82802495

网址: <http://www.pumpress.com.cn>

E-mail: [booksale@bjmu.edu.cn](mailto:booksale@bjmu.edu.cn)

印刷: 北京佳信达欣艺术印刷有限公司

经销: 新华书店

责任编辑: 冯智勇 责任印制: 张京生

开本: 889mm×1194mm 1/16 印张: 33.5 字数: 1072 千字

版次: 2014 年 8 月第 1 版 2014 年 8 月第 1 次印刷

书号: ISBN 978-7-5659-0887-3

定价: 125.00 元

版权所有, 违者必究

(凡属质量问题请与本社发行部联系退换)

## DEDICATION AND AUTHORS

Paul C. Arvey, MD  
Halsted Resident

To my family, my mentors, and to all surgical residents of past, present, and future, for their continued inspiration.

Baltimore, Maryland

Guillermo Ballas, MBS

To my family for all their love and support, and to all those who make the Halsted surgical residency what it is.

Athens, Greece  
Barnes Halsted Intern

To all current Halsted residents and to the inspiration of all those who have come before.

Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Benjamin S. Brooks, MD, PhD

Assistant Professor  
Division of Vascular Surgery  
Department of Surgery  
University of Utah  
School of Medicine  
Salt Lake City, Utah  
Former Halsted Resident

Andrew P. Dhawanagar, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Trevor A. Ellison, MD, MBA

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Jonathan A. Fortna, MD

Chief Resident  
Department of Neurosurgery  
Vanderbilt University Medical Center  
Nashville, Tennessee  
Former Halsted Intern

Jacqueline Gersbach Wang, MD, PhD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Timothy J. Geiger, MD  
Halsted Resident

Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

—R.A.M.

Seán P. Golden, MD

Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

—K.J.V.A.

Halsted Resident

Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

—P.A.L.

Casey Hovey, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Sam S. Karhadkar, MD

Fellow  
Division of Transplant Surgery  
Department of Surgery  
University of Maryland  
School of Medicine  
Baltimore, Maryland  
Former Halsted Intern

Clinton D. Kame, MD

Cardiothoracic Surgery Fellow  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

Betsy King, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

Lisa M. Kusadek, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

## CONTRIBUTING AUTHORS

### Said C. Azoury, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Nikiforos Ballian, MBBS

General Surgeon  
Department of Surgery  
Mitera Hospital  
Athens, Greece  
Former Halsted Intern

### Jens U. Berli, MD

Plastic Surgery Resident  
Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Benjamin S. Brooke, MD, PhD

Assistant Professor  
Division of Vascular Surgery  
Department of Surgery  
University of Utah  
School of Medicine  
Salt Lake City, Utah  
Former Halsted Resident

### Andrew P. Dhanasopon, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Trevor A. Ellison, MD, MBA

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Jonathan A. Forbes, MD

Chief Resident  
Department of Neurosurgery  
Vanderbilt University Medical Center  
Nashville, Tennessee  
Former Halsted Intern

### Jacqueline Garonzik-Wang, MD, PhD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Timothy J. George, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Seth D. Goldstein, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Joshua C. Grimm, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Isaac Howley, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Sunil S. Karhadkar, MD

Fellow  
Division of Transplant Surgery  
Department of Surgery  
University of Maryland  
School of Medicine  
Baltimore, Maryland  
Former Halsted Intern

### Clinton D. Kemp, MD

Cardiothoracic Surgery Fellow  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### Betsy King, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Lisa M. Kodadek, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Jayme E. Locke, MD, MPH**

Assistant Professor of Surgery  
 Division of Transplantation  
 University of Alabama at Birmingham  
 School of Medicine  
 Birmingham, Alabama  
 Former Halsted Resident

**Bonnie E. Lonze, MD, PhD**

Fellow in Transplant Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Ying Wei Lum, MD**

Assistant Professor  
 Division of Vascular Surgery & Endovascular  
 Therapy  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Section Director for Anatomy  
 Perdana University  
 Graduate of Medicine  
 Serdang, Malaysia  
 Former Halsted Resident

**Konstantinos I. Makris, MD**

Clinical Fellow  
 Section of Endocrine Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Michele A. Manahan, MD**

Assistant Professor  
 Department of Plastic and Reconstructive Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Justin B. Maxhimer, MD**

Department of Plastic and Reconstructive Surgery  
 UCLA Medical Center  
 Los Angeles, California  
 Former Halsted Resident

**Robert A. Meguid, MD, MPH**

Assistant Professor of Surgery  
 Division of Cardiothoracic Surgery  
 Department of Surgery  
 University of Colorado  
 School of Medicine  
 Aurora, Colorado  
 Former Halsted Resident

**Raja Mohan, MD**

Plastic Surgery Resident  
 Department of Plastic and Reconstructive Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Susanna M. Nazarian, MD, PhD**

Assistant Professor  
 Division of Transplant Surgery  
 Department of Surgery  
 University of Washington Medical Center  
 Seattle, Washington  
 Former Halsted Resident

**Kelly Olino, MD**

Surgical Oncology Fellow  
 Department of Surgery  
 Memorial Sloan-Kettering Cancer Center  
 New York, New York  
 Former Halsted Resident

**Babak J. Orandi, MD, MSc**

Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Emmanouil Pappou, MD**

Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Jose H. Salazar, MD**

Postdoctoral Fellow  
 Division of Pediatric Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Ibrahim Sultan, MD**

Cardiothoracic Surgery Fellow  
 Division of Cardiac Surgery  
 Department of Surgery  
 Hospital of the University of Pennsylvania  
 Philadelphia, Pennsylvania  
 Former Halsted Resident

**Vicente Valero III, MD**

Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Kyle J. Van Arendonk, MD, PhD**

Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Eric S. Weiss, MD, MPH**

Attending Staff Surgeon  
 Department of Cardiac Surgery  
 Advanced Fellow  
 Department of Transplantation and Mechanical  
 Circulatory Support  
 Columbia University  
 New York Presbyterian Hospital  
 New York, New York  
 Former Halsted Resident

**Matthew J. Weiss, MD**

Assistant Professor of Surgery  
 Section of Hepato-Pancreato-Biliary Surgery  
 Division of Surgical Oncology  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Jordan M. Winter, MD**

Assistant Professor of Surgery  
 Division of Surgical Oncology  
 Department of Surgery  
 Thomas Jefferson University  
 Philadelphia, Pennsylvania  
 Former Halsted Resident

**Joshua H. Wolf, MD**

Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Kashif A. Zuberi, MBBCh, MRCSI**

Fellow in Minimally Invasive Surgery  
 General and Gastrointestinal Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Genitourinary, Head and Neck, and  
Muscle and Nerve System**

Jacqueline Ganatik-Wang, MD, PhD  
 Halsted Resident  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

Frederick E. Schaubert, MD, FACS  
 Professor of Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

Samir H. Eidi, MD, FACS  
 Associate Professor of Surgery  
 Department of Surgery  
 University of Colorado  
 School of Medicine  
 Aurora, Colorado  
 Former Halsted Resident

## SECTION EDITORS

### Body as a Whole

#### Andrew P. Dhanasopon, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

#### Emmanouil Pappou, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Endocrine, Hematic, Lymphatic, and Breast

#### Brenessa M. Lindeman, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

#### Joshua H. Wolf, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Genitourinary, Head and Neck, Skin, Muscle, and Nervous System

#### Jacqueline Garonzik-Wang, MD, PhD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

#### Seth D. Goldstein, MD

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Cardiovascular and Respiratory

#### Clinton D. Kemp, MD

Cardiothoracic Surgery Fellow  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

#### Babak J. Orandi, MD, MSc

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### Gastrointestinal

#### Trevor A. Ellison, MD, MBA

Halsted Resident  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

#### Kelly Olino, MD

Surgical Oncology Fellow  
Department of Surgery  
Memorial Sloan-Kettering Cancer Center  
New York, New York  
Former Halsted Resident



## CONTRIBUTING EDITORS

### **Christopher J. Abularrage, MD**

Assistant Professor of Surgery  
Division of Vascular Surgery and Endovascular Therapy  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Mohamad E. Allaf, MD**

Associate Professor of Urology and Oncology  
Director  
Minimally Invasive and Robotic Surgery  
Department of Urology  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Pablo A. Baltodano, MD**

Postdoctoral Research Fellow  
Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **William A. Baumgartner, MD**

The Vincent L. Gott Professor of Cardiac Surgery  
Vice Dean for Clinical Affairs  
Johns Hopkins Medicine  
Baltimore, Maryland

### **Arthur L. Burnett, MD, MBA, FACS**

Patrick C. Walsh Distinguished Professor of Urology  
Department of Urology  
Johns Hopkins Medical Institutions  
Baltimore, Maryland

### **Andrew M. Cameron, MD, PhD**

Associate Professor of Surgery  
The Comprehensive Transplant Center  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Duke E. Cameron, MD**

Cardiac Surgeon-in-Charge  
James T. Dresher Sr. Professor of Surgery  
Chief, Division of Cardiac Surgery  
Director, Pediatric Cardiac Surgery  
Director, Dana and Albert "Cubby" Broccoli Aortic  
Surgery Center  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Nicole M. Chandler, MD**

Assistant Professor of Surgery  
Division of Pediatric Surgery  
Department of Surgery  
All Children's Hospital  
Johns Hopkins University  
School of Medicine  
St. Petersburg, Florida

### **Albert Chi, MD**

Assistant Professor of Surgery  
Division of Acute Care Surgery and Adult Trauma  
Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Michael A. Choti, MD, MBA**

Jacob C. Handelsman Professor of Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Alan P.B. Dackiw, MD, PhD, BSc, BSc(Med), FACS, FRCS**

Associate Professor of Surgery  
Associate Professor of Oncology  
Division of Endocrine Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Mark D. Duncan, MD, FACS**

Associate Professor of Surgery  
Associate Professor of Oncology  
Division of Surgery and Oncology  
Vice Chair  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Frederick E. Eckhauser, MD, FACS**

Professor of Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Barish H. Edil, MD, FACS**

Associate Professor of Surgery  
Department of Surgery  
University of Colorado  
School of Medicine  
Aurora, Colorado  
Former Halsted Resident

**David T. Efron, MD, FACS**

Associate Professor of Surgery  
 Associate Professor of Anesthesiology and Critical  
 Care Medicine  
 Director of Trauma, The Johns Hopkins University  
 School of Medicine  
 Chief, Division of Trauma and Surgical Critical Care  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Jonathan E. Efron, MD**

Associate Professor of Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Frank J. Frassica, MD**

Professor of Orthopedics and Oncology  
 E. J. Frassica Professor of Orthopedic Surgery  
 Department of Orthopedic Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Julie A. Freischlag, MD**

The William Stewart Halsted Professor  
 Surgeon-in-Chief  
 Department of Surgery  
 Johns Hopkins Medical Institutions  
 Baltimore, Maryland

**Susan L. Gearhart, MD**

Associate Professor  
 Division of Colorectal Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Mehran Habibi, MD, MBA**

Assistant Professor of Surgery  
 Division of Surgical Oncology  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Elliott R. Haut, MD, FACS**

Associate Professor of Surgery  
 Associate Professor of Anesthesiology and Critical  
 Care Medicine  
 Associate Professor of Emergency Medicine  
 Division of Acute Care Surgery and Adult Trauma  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Kenzo Hirose, MD, FACS**

Assistant Professor of Surgery  
 Associate Program Director  
 Halsted Surgical Residency  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Lisa K. Jacobs, MD**

Associate Professor of Surgery  
 Associate Professor of Oncology  
 Division of Surgical Oncology  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Asad Latif, MBBS, MPH**

Assistant Professor of Anesthesiology and Critical  
 Care Medicine  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Anne O. Lidor, MD, MPH**

Associate Professor of Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Pamela A. Lipsett, MD, MHPE, FACS, FCCM**

Professor of Surgery, Anesthesia and Critical Care  
 Medicine, and Nursing  
 General Surgery and Surgical Critical Care Program  
 Director  
 Co-Director of the Surgical Intensive Care Units  
 Department of Surgery  
 Johns Hopkins University  
 Schools of Medicine and Nursing  
 Baltimore, Maryland  
 Former Halsted Resident

**Ying Wei Lum, MD**

Assistant Professor of Surgery  
Division of Vascular Surgery & Endovascular  
Therapy

Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Section Director for Anatomy  
Perdana University  
Graduate of Medicine  
Serdang, Malaysia  
Former Halsted Resident

**Martin A. Makary, MD, MPH**

Associate Professor of Surgery and Health Policy &  
Management

Department of Surgery  
Johns Hopkins University  
School of Medicine  
Director of Pancreas Islet Transplant Center  
Director of Surgical Quality and Safety  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Konstantinos I. Makris, MD**

Clinical Fellow  
Section of Endocrine Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Michele A. Manahan, MD**

Assistant Professor of Surgery  
Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Robert A. Meguid, MD, MPH**

Assistant Professor of Surgery  
Division of Cardiothoracic Surgery  
Department of Surgery  
University of Colorado  
School of Medicine  
Aurora, Colorado  
Former Halsted Resident

**Gedge D. Rosson, MD**

Associate Professor of Surgery  
Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Richard D. Schulick, MD, MBA, FACS**

The Aragón/Gonzalez-Giusti Chair  
Professor and Chair of the Department of Surgery  
University of Colorado  
School of Medicine  
Aurora, Colorado  
Former Halsted Resident

**Christopher M. Sciortino, MD, PhD**

Assistant Professor of Surgery  
Division of Cardiac Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Dorry L. Segev, MD, PhD**

Associate Professor of Surgery  
Division of Transplantation Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Kent A. Stevens, MD, MPH**

Assistant Professor of Surgery  
Department of Surgery  
Division of Acute Care Surgery and Adult Trauma  
Surgery  
Johns Hopkins Medical Institutions  
Baltimore, Maryland

**F. Dylan Stewart, MD, FACS**

Assistant Professor of Surgery  
Director of Pediatric Trauma  
Division of Pediatric Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Anne J.W. Tong, MBBS**

Postdoctoral Research Fellow  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Anthony P. Tufaro, DDS, MD, FACS**

Associate Professor of Surgery  
Associate Professor of Oncology  
Vice Chief of Plastic and Reconstructive Surgery  
Departments of Plastic Surgery and Oncology  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Matthew J. Weiss, MD**

Assistant Professor of Surgery  
 Section of Hepato-Pancreato-Biliary Surgery  
 Division of Surgical Oncology  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland  
 Former Halsted Resident

**Glenn J.R. Whitman, MD**

Associate Professor of Surgery  
 Director of Cardiovascular Surgical Intensive Care  
 Unit  
 Division of Cardiac Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Elizabeth C. Wick, MD**

Assistant Professor of Surgery  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Bradford D. Winters, MD, PhD**

Associate Professor of Anesthesiology and Critical  
 Care Medicine  
 Assistant Professor of Neurological Surgery  
 Assistant Professor of Neurology  
 Assistant Professor of Surgery  
 Departments of Anesthesiology and Critical Care  
 Medicine and Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Stephen C. Yang, MD, FACS, FCCP**

The Arthur B. and Patricia B. Modell Professor in  
 Thoracic Surgery  
 Professor of Oncology  
 Division of Thoracic Surgery  
 Associate Vice Chair  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

**Martha A. Zeiger, MD, FACS**

Professor of Surgery, Oncology, Cellular and  
 Molecular Medicine  
 Chief  
 Endocrine Surgery  
 Associate Vice Chair of Research  
 Department of Surgery  
 Johns Hopkins University  
 School of Medicine  
 Baltimore, Maryland

## PRIOR EDITORS

### **Charles M. Balch, MD, FACS**

Professor of Surgery  
Division of Surgical Oncology  
Department of Surgery  
University of Texas  
Southwestern Medical Center  
Dallas, Texas

### **James H. Black III, MD, FACS**

The Bertram M. Bernheim, MD Associate Professor of  
Surgery  
Division of Vascular Surgery and Endovascular Therapy  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Malcolm V. Brock, MD, FACS**

Associate Professor of Surgery  
Associate Professor of Oncology  
Division of Thoracic Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Stephen M. Cattaneo II, MD**

Assistant Professor of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Chief  
Thoracic Surgery Division  
Director  
Surgical Oncology  
The Anne Arundel Medical Center  
Annapolis, Maryland  
Former Halsted Resident

### **Edward E. Cornwell III, MD, FACS, WACS, FCCM**

The LaSalle D. Leffall, Jr. Professor and Chairman  
of Surgery  
Surgeon-in-Chief  
College of Medicine  
Howard University Hospital  
Washington, DC

### **Julie R. Lange, MD, ScM, FACS**

Associate Professor of Surgery  
Associate Professor of Dermatology  
Associate Professor of Oncology  
Division of Surgical Oncology  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Thomas H. Magnuson MD**

Associate Professor of Surgery  
Chief of General Surgery  
Johns Hopkins Bayview Medical Center  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Paul N. Manson, MD, FACS**

Professor of Plastic and Reconstructive Surgery  
Department of Plastic and Reconstructive Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

### **Robert A. Montgomery, MD, DPhil, FACS**

Professor of Surgery  
Chief, Division of Transplantation Surgery  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

### **Timothy M. Pawlik, MD, MPH, PhD**

Professor of Surgery and Oncology  
John L. Cameron M.D. Professor of Alimentary  
Tract Diseases  
Chief  
Division of Surgical Oncology  
Director  
Johns Hopkins Medicine Liver Tumor Center  
Multi-Disciplinary Clinic  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Theodore N. Tsangaris, MD**

Associate Professor of Surgery  
Division of Surgical Oncology  
Department of Surgery  
Yale School of Medicine  
New Haven, Connecticut

**G. Melville Williams, MD, FACS**

Professor of Surgery, Retired  
Division of Vascular Surgery and Endovascular  
Therapy  
Department of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Christopher L. Wolfgang, MD, PhD**

Associate Professor of Surgery  
Department of Pathology and Oncology  
Chief  
Department of Hepatobiliary and Pancreatic Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Paul H. Blumgart, MD, FACS**

Professor of Visceral and Hepatobiliary Surgery  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Robert A. Montgomery, MD, PhD, FACS, FRCGS**

Professor of Visceral and Hepatobiliary Surgery  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Thomas A. Ponsky, MD, MPH, PhD**

Professor of Surgery and Director  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Edward E. Conwell III, MD, FACS, WAOB, FRCM**

Professor and Chairman  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland

**Michael W. Brock, MD, FACS**

Associate Professor of Surgery  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**James H. Black III, MD, FACS**

Theodore M. Halsted Professor of Surgery  
Department of Visceral and Hepatobiliary Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Former Halsted Resident

**Lawrence M. Blumgart, MD**

Assistant Professor of Surgery  
Johns Hopkins University  
School of Medicine  
Baltimore, Maryland  
Chief  
Visceral Surgery Division  
Director  
Surgical Oncology  
The Anne Arundel Medical Center  
Annapolis, Maryland  
Former Halsted Resident

**Byron D. Cahill, Jr, Professor and Chairman**

Department of Surgery  
Georgetown University  
College of Medicine  
Howard University Hospital  
Washington, DC

## FOREWORD

The American Board of Surgery offers an annual In-Training Examination (ABSITE), a multiple-choice examination that measures the progress of residents in terms of their knowledge of applied science and management of clinical problems. The purpose of the Johns Hopkins ABSITE Review Manual is to provide, in a single text, a comprehensive review of the field of general surgery tailored to the busy surgical resident. This is the second edition of a collective work of many Johns Hopkins (Halsted) residents which has been reviewed by their surgical faculty. In addition to providing a review of current general surgical principles, it is also a practice tool for the examination itself. Not only can this manual be used to review for the ABSITE, but also for the general surgery qualifying examination or for review of topics presented in a concise fashion.

The first edition was published in 2009 and contained a full-length 225 question practice examination with detailed answers written by former Johns Hopkins surgery residents and reviewed by the Hopkins faculty. It was well received both nationally and internationally as a study aid. For the second edition, the authors and editors have completely revised and updated the 225 original questions, and have added a second full-length 225 question examination. This ABSITE review book will be the only one on the market with two full-length, comprehensive, expert faculty-reviewed examinations. Key figures and tables have been included for many of the questions, as well as up-to-date cancer staging and treatment algorithms.

It is indeed fitting that this manual is published by the surgical residents and faculty of the Johns Hopkins University. The most famous surgical resident and faculty member to emanate from the Johns Hopkins Department of Surgery is Dr. John L. Cameron, who also served as Chair and helped to train thousands of surgeons. He is also responsible for disseminating dozens of other Chairs of Surgery around the country.

In many presentations and publications, I have heard him say that until the opening of the Johns Hopkins Hospital in 1889, there was no formal system to train surgeons in the United States. All surgeons were self-trained or learned by way of an apprenticeship, and few spent more than one or two years in a hospital setting. Dr. William Stewart Halsted was named as the first Chair of Surgery at Johns Hopkins and introduced a system in which medical school graduates entered a university-sponsored, hospital-based surgical training program. Over a several-year period of increasing responsibility, these young surgeons became well versed in surgery, anatomy, pathology, bacteriology, and physiology. The training program culminated in a final period of near-total independence and autonomous activity. This training system eventually spread throughout the entire country.

Surgical residents will find this manual extremely helpful in preparation for the ABSITE. The editors and authors have put together a valuable tool and comprehensive review of general surgery for the benefit of surgical residents. It follows in the footsteps of Halsted, Cameron, and other accomplished surgical educators hailing from the Johns Hopkins University.

“Before anything else, preparation is the key to success.”—Alexander Graham Bell

Richard D. Schulick, MD, MBA, FACS  
The Aragón/Gonzalez-Giustí Chair  
Professor and Chair of the Department of Surgery  
University of Colorado School of Medicine  
Aurora, Colorado

Halsted Resident, 1989–1997  
Johns Hopkins Surgery Faculty, 1999–2012

September 2013

## PREFACE

The first edition of this text emanated from the need for a readily available, full-length practice examination for the annual American Board of Surgery In-Training Examination © (ABSITE). The germinal seed was the formation of a curriculum of study for the Halsted Residents in General Surgery at the Johns Hopkins University School of Medicine.

This second edition has been expanded to include two full-length practice examinations: A revised version of the practice examination included in the first edition and a completely new full-length practice examination. Questions in the first practice examination have been revised based upon feedback from faculty and residents from across the country and updated to reflect changes in patient management and surgical science since the first edition was published in 2009.

While two separate examinations were administered for junior (PGY 1 and 2) and senior (PGY 3 to 5) residents starting in 2006, the American Board of Surgery has now resumed administration of a single examination for all general surgery trainees. Therefore, this text is aimed at all surgical residents, irrespective of year of training.

Questions and accompanying explanations were written by Johns Hopkins Halsted surgical residents and edited by faculty members of the Johns Hopkins University School of Medicine (or other institutions as needed). Questions were generated from key words provided by the American Board of Surgery from recent ABSITEs.

The distribution of questions is comparable to the ABSITE in both subject content and balance between clinical and basic science emphasis. Explanations are referenced to popular surgical textbooks, journal articles, and websites. The questions are intentionally difficult, designed to challenge students of surgery.

Aside from the key words themselves, none of the information presented in this text was obtained from the American Board of Surgery. Any similarities to actual questions presented in prior ABSITEs are purely coincidental. It is the senior editors' intention that this text be used in conjunction with a structured, regular reading schedule for the education of surgical residents. While we have intended the questions to represent the broad areas of study for the general surgery resident, the text does not serve as a complete survey of the general surgery field.

It is through extensive resident and faculty collaboration that this text has made it to press and into your hands, and we wish to express our deep gratitude to all its contributors. We hope that this text proves useful to surgical residents as they prepare for the ABSITE and seek to master the field of general surgery.

Good luck.

*R.A.M., K.J.V.A., P.A.L.*

SECTION III. Full-Length Practice Examination 2	257
Answer Key for Practice Examination 2	307
SECTION IV. Questions with Answers and Explanations for Practice Examination 2	311
1. Body as a Whole	313
2. Gastrointestinal	393
3. Cardiovascular and Respiratory	421
4. Miscellaneous (Gastroenterology, Head and Neck, Skin, Muscles, and Nervous System)	445
5. Endocrine, Hematologic, Lymphatic, and Breast	473
Index by Key Word	497
Index	507



# CONTENTS

Contributing Authors . . . . .	v
Section Editors . . . . .	viii
Contributing Editors . . . . .	ix
Prior Editors . . . . .	xiii
Foreword . . . . .	xv
Preface . . . . .	xvii
<b>SECTION I. Full-Length Practice Examination 1 . . . . .</b>	<b>1</b>
Answer Key for Practice Examination 1 . . . . .	47
<b>SECTION II. Questions with Answers and Explanations for Practice Examination 1 . . . . .</b>	<b>51</b>
1. Body as a Whole . . . . .	53
2. Gastrointestinal . . . . .	105
3. Cardiovascular and Respiratory . . . . .	165
4. Miscellaneous (Genitourinary, Head and Neck, Skin, Muscle, and Nervous System). . . . .	201
5. Endocrine, Hematic, Lymphatic, and Breast . . . . .	227
<b>SECTION III. Full-Length Practice Examination 2 . . . . .</b>	<b>257</b>
Answer Key for Practice Examination 2 . . . . .	307
<b>SECTION IV. Questions with Answers and Explanations for Practice Examination 2. . . . .</b>	<b>311</b>
1. Body as a Whole . . . . .	313
2. Gastrointestinal . . . . .	383
3. Cardiovascular and Respiratory . . . . .	421
4. Miscellaneous (Genitourinary, Head and Neck, Skin, Muscle, and Nervous System). . . . .	445
5. Endocrine, Hematic, Lymphatic, and Breast . . . . .	473
Index by Key Word . . . . .	497
Index. . . . .	507