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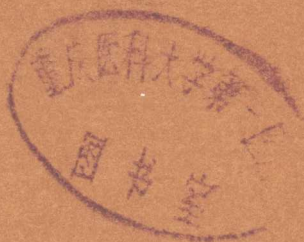


**Spiral**®  
Manual

# Manual of Diagnostic Imaging

A Clinician's Guide  
to Clinical Problem Solving  
Second Edition

一九九一年十一月一日



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**MANUAL OF  
DIAGNOSTIC IMAGING**  
A CLINICIAN'S GUIDE TO  
CLINICAL PROBLEM SOLVING  
SECOND EDITION

EDITED BY

**William H. Straub, M.D.**

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Second Edition

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To the staff and students of Georgetown  
University School of Medicine, circa 1964



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## FOREWORD

New technical diagnostic methods of great complexity and expense proliferate at an unprecedented rate, more rapidly than their value can be easily assessed. Continued efforts are needed to understand the value of examinations in various clinical situations and to use this understanding in planning a diagnostic workup specific to a clinical problem, so that a diagnosis can be reached as quickly and economically as possible.

Since the first edition of the *Manual of Diagnostic Imaging*, which appeared in 1984, health care expenses have continued to escalate, despite the introduction of the various prepaid schemes designed to contain them. With increasing awareness of the need for cost-containment, clinicians who order diagnostic examinations have become more responsible. However, the need for recognition and elimination of procedures of dubious value is still with us, along with the need for a more widespread knowledge of the characteristics of tests and the predictive value of their results. This book fills such a need. If the medical profession neglects to take the lead, controls will be imposed from without, which will be arbitrary, onerous, and inefficient. Now, it is more important than ever for the medical profession to take the lead in cost-containment, controls, and other related activities.

This small book concerns itself with the use of diagnostic imaging procedures. It does not suggest that cost overruns are a more serious matter in the diagnostic field than elsewhere in medicine, or that unnecessary tests are more objectionable than unnecessary surgical operations or the prescription of unnecessary drugs; imaging costs are only a small part of the total medical bill. Nevertheless, the logical and economical use of imaging methods described in this book can result in a considerable saving and contribute to the general benefit, rather than detriment, of the patient.

Ronald J. Hoy, M.B.B.S.



## PREFACE

The second edition is prompted by the same factors that led to the first: namely, the need to use diagnostic imaging studies more efficiently in the presence of continued costly technologic developments in diagnostic imaging, and ever-increasing pressures on physicians to control costs.

This manual is directed primarily to medical students and house officers—to assist them in selecting efficient workups for their patients that will, it is hoped, carry over into their practices. Algorithms are used to summarize diagnostic workups for a variety of common clinical problems, recognizing there may be other schemata that are equally efficient. The discussion provided on each topic is necessarily superficial, annotated references being provided for those seeking more in-depth coverage.

Significant changes in the second edition include the incorporation of magnetic resonance imaging (MRI) into the evaluation of neurologic and other diseases. The impact of this technology on medical diagnosis has not yet been fully realized but is anticipated to be great. The potential impact of AIDS on clinical practice has necessitated that we address it from an imaging standpoint, with many concepts just now being developed. Finally, more clinicians have been used as reviewers or contributing authors to ensure more practicality and credibility.

William H. Straub, M.D.

## COMMON ABBREVIATIONS

AFP	Alpha fetoprotein
ANGIO	Angiography
AVM	Arteriovenous malformation
BE	Barium enema
CA	Cancer
CBC	Complete blood count
CEA	Carcinoembryonic antigen
CT	Computed tomography
D and C	Dilatation and curettage
DRGs	Diagnostic related groups
DSA	Digital subtraction angiography
EAC	External auditory canal
EEG	Electroencephalogram
ECHO	Echocardiography
ERCP	Endoscopic retrograde cholangiopancreatography
FNA	Fine-needle aspiration
GB	Gallbladder
GU	Genitourinary
HCG	Human chorionic gonadotropin
IDA	Tc-labeled imidodiacetic compound for imaging biliary system
IPG	Impedance plethysmography
IVP	Intravenous pyelogram
KUB	Kidneys, ureters, and bladder
LDH	Lactic dehydrogenase
LFTs	Liver function tests
MEO	Malignant external otitis
MI	Myocardial infarction
MRI	Magnetic resonance imaging
NPH	Normal pressure hydrocephalus
PA	Posteroanterior
PET	Positron emission tomography
PTA	Percutaneous transluminal angioplasty
PTC	Percutaneous transhepatic cholangiogram
RCM	Radiocontrast material
RN	Radionuclide
RNS	Radionuclide scan
R/O	Rule out
RT	Radiation therapy
RUQ	Right upper quadrant
SB	Small bowel
SGOT	Serum glutamic oxaloacetic transaminase
SI	Small intestinal
SNHL	Sensorineuro hearing loss
SPECT	Single photon emission computed tomography
Tc	Technetium
Tomo	Conventional tomography
TSH	Thyroid-stimulating hormone
UA	Urinalysis
UGI	Upper gastrointestinal
US	Ultrasound
X RAY	Radiography

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