LEWIS E. ETTER, M.D.

# GLOSSARY OF WORDS AND PHRASES USED IN RADIOLOGY AND NUCLEAR MEDICINE

Prepared from various sources for Medical Secretaries, X-ray Technicians, Medical Students and Residents in Radiology

By

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> With a Section on Suggested Terminology for Roentgenological Reports

Devised by
Doctors Fisher, Bovard, and Bacon

for the
Pennsylvania Radiological Society

Foreword by
Olive G. Johnson, A.B.
Medical Record Librarian-in-Chief
Health Center
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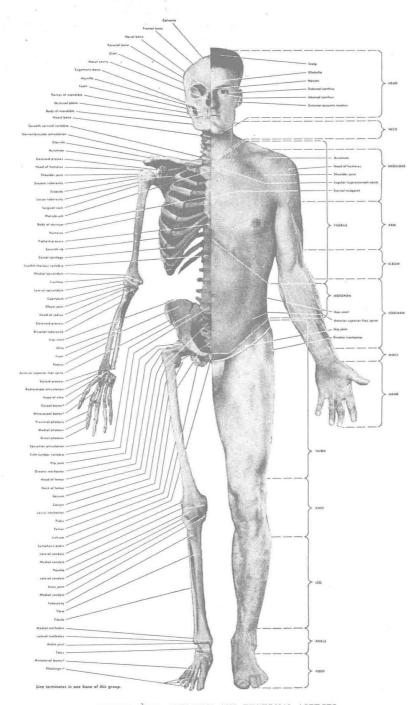
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# GLOSSARY OF WORDS AND PHRASES USED IN RADIOLOGY AND NUCLEAR MEDICINE



HUMAN BODY. SKELETAL AND EXTERNAL ASPECTS

To GRACE Language is the armory of the human mind; and at once contains the trophies of its past, and the weapons of its future conquests.

SAMUEL TAYLOR COLERIDGE

#### FOREWORD

By

OLIVE G. JOHNSON, A.B.

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The many advances in Radiology in the past decade have resulted in the development of new descriptive terms as well as a new focus on words already in the scientific vocabulary. Knowledge of these terms, their meaning, and correct spelling is a requisite for every medical secretary. In addition to a general knowledge of medical terminology, every secretary should be thoroughly conversant with the technical vocabulary of the department in which she is employed. Accurate transcription of findings and treatment prescribed by the radiologist is essential for patient care, teaching and research.

This Glossary meets a great need. The author, cognizant of the lack of material for teaching in this area, is to be commended for the time and effort expended on this worthwhile enterprise which has been designed for both study and reference. It is comprehensive in scope, complete in detail, and yet concise and compact in format. The alphabetic arrangement of words and phrases permits quick reference. The inclusion of Suggested Terminology for Roentgenological Reports as well as Sample Reports augments its use in teaching the application and association of terms.

Faculty of schools for medical secretaries, residents in radiology, nurses, medical record librarians, medical students and x-ray technicians, as well as all personnel employed in the health field will find this volume an excellent text. Directors of Departments of Personnel and Medical Records in hospitals who are responsible for in-service training programs for medical secretaries will welcome this publication as a valuable teaching tool. It is indeed a significant contribution to the health field.

#### INTRODUCTION

Medical dictionaries contain practically all the words used in general medical dictation. Some of these books are rather large and unwieldy. It occurred to the author that a collection concentrated for a particular branch of medical terminology might be of value for a student of the subject, or for a medical secretary who needs to know the words and phrases commonly used in the specialty of Radiology and Nuclear Medicine. Not only may this glossary serve for reference, but it may also be reviewed frequently in order to become familiar with spelling and definitions of these words.

Medical secretaries may be a great help to doctors in many ways. Who else, to quote Mrs. Walter Ferguson, ". . . is there besides his wife to protect him against the slings and arrows of outrageous fortune?" Sheltered then, and buffered by his "girl Friday," a doctor may study his radiographs and formulate ideas which the report will tell exactly. No phrases will appear which have been known to creep into reports in less hallowed halls of learning, viz, "GI Track" for "Tract," "central" for "congenital" heart disease, "cereal" for "serial" examinations, "psychosemantic" for "psychosomatic" or the classic "no more thorax" for "pneumothorax." She will not be trapped by such homonyms as bazaar, bizarre, and bezoar. The secretary will not be fooled, that is, if the doctor is careful to enunciate and occasionally spell or explain some words or phrases which may be indistinguishable when heard on a dictating machine. Such a term as foramen ovale has been known to come out "foraminal valley."

In addition to being competent in the particulars above referred to, perhaps the most valued quality in a medical secretary is her ability to keep everything she knows strictly confidential. It is an inviolate rule and an important factor in her position that a secretary should never betray a confidence. What passes between a doctor and his patient is given in confidence and is expected to go no farther. Because of her position the secretary, of course, is privy to what transpires and is trusted with many kinds of secrets. A secretary must be on guard particularly with her close friends and neighbors and should resist at all times the temptation to be a gossip. She should be able to say a firm and definite "I don't know" to any prying or subtle questioning. The reputation of the doctor and feelings of the patient must come before the secretary's desire to be the bearer of what might be considered sensational information. Obviously, the release of such material can redound only to her discredit and perhaps result in the loss of her position and reputation.

It is hoped that this glossary will enable the secretary to fulfill another es-

sential requirement of the doctor, namely, that she be accurate and precise in preparing reports, no matter how trivial or monotonous some of them may seem, because they are of extreme significance to the patient whose treatment is often determined by what is recorded. From the standpoint of the Chief of a Radiology Department, a most important person in the entire group of personnel is the secretary who transcribes the reports, because these are what represent the X-ray Department in the eyes of others. If the reports are not clear, distinct, and informative, all the expensive technical equipment, excellent work of technicians and interpretive effort of the radiologist will be for nothing. The knowledge that their work is essential to the smooth working of any medical team, should be a source of the greatest satisfaction to all medical secretaries.

LEWIS E. ETTER, M.D.

#### PREFACE

This volume of words and phrases has been written primarily for medical secretaries, residents in Radiology, and x-ray technicians who frequently may be called upon to double as secretary. Such a technician can be of inestimable value to her employer, especially in small offices. Medical secretaries, too, may be equally helpful by learning some x-ray technical procedures, such as processing, sorting, and filing films.

For residents in Radiology, this material furnishes a quick review of the field by providing words and phrases which can frequently help to formulate ideas with regard to pathological processes observed or to be treated. Many cross references have been included, particularly when two or more terms have essentially the same meaning. The reader is never directed to look under a different heading when alternative references to the subject are equally reasonable, as the definition is repeated for each one.

In this work I have received generous help from Miss Judith Weilerstein, Chief Medical Record Librarian in the Falk Clinic, and her medical secretarial students. Miss Laurabelle Eakin, B.S., Research Librarian of the Health Professions Library, University of Pittsburgh, has rendered invaluable service in providing many references. My secretaries, Mrs. Joan S. Carter, Mrs. Catherine C. Carter, Mrs. Grace A. Lee, Mrs. Gertrude Lennon, Miss Dorothy J. Kisiel, and Mrs. Helen M. Stewart, R.T., Supervising and Chief X-ray Technician, have worked hard on the text and transcriptions. Dr. H. Curtis Long, Senior Teaching Fellow in Radiology, spent many hours correcting text and definitions as well as suggesting new words and phrases for inclusion. His excellent critical sense has been of inestimable value in deciding many questions. Thanks are due Mr. Michael DeMarco for able editorial assistance and to Dr. Elliott Lasser, Professor of Radiology and Chairman of the Department, School of Medicine, University of Pittsburgh, for valuable suggestions and proof reading. Drs. Fisher,\* Boyard, and Bacon have contributed immensely by permitting inclusion of their section on Suggested Terminology for Roentgenological Reports.

To these associates my sincere thanks and gratitude. Without their suggestions and encouragement, the accomplishment of this work would have been most difficult if not impossible to complete.

LEWIS E. ETTER, M.D.

<sup>\*</sup> Joseph W. Fisher, M.D., Pittsburgh, Deceased 1952.

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## GLOSSARY OF WORDS AND PHRASES USED IN RADIOLOGY AND NUCLEAR MEDICINE



#### RADIOLOGICAL SYMBOLS AND SEMANTICS1

The language of Radiology has become confused in recent years. Its use by the general medical public and laymen as well has greatly increased. Thus, it has become quite common to hear expressions such as, "May I have my x ray," "I've come for my x ray," "He x-rayed me," "My x-ray picture showed . . . ." The mathematical sign used by Roentgen to indicate an unknown or mysterious kind of ray is now being employed both as a noun and as a verb. The word x ray is short and direct and connotes both a picture or shadow transparency, and the act of producing the same. No doubt the American tendency to shortcuts can be credited with substituting "x ray" for the more correct roentgenogram, or radiograph of the British, and "x-ray" technician for the British radiographer. Probably, too, mass radiographic surveys have contributed to the use of the term "x ray" as an easy vehicle with which to convey the idea that something may be discovered by such an examination of everyone's chest. In reporting the results of such examinations and faced with the necessity of writing headlines, one could hardly expect newswriters to use such correct terms as "Survey Roentgenograms" or "Roentgenographic Surveys." Therefore, "x ray" as both noun and verb is probably here to stay, and there is little one can do about it.

Just as the sign x ray has become commonly accepted for Roentgen, one would have imagined the term "film" might have likewise become popular, but it has never enjoyed the vogue of "plate" or more especially, "flat plate." These names date from World War I days when George Eastman substituted emulsioncoated film for the old glass plates. These plates were certainly flat, but perhaps this word was meant to indicate a single exposure of the chest, skull, or abdomen as distinguished from a stereoscopic pair or an exposure before contrast media were either swallowed or injected. Regardless of origin, it has persisted in today's medical parlance and may even become, if it has not already become, accepted by common usage. If so, this acceptance would be unfortunate, because one can utilize much more descriptive and meaningful phrases, i.e., posteroanterior and lateral radiographs of the chest and skull or plain, scout or survey radiographs of the abdomen. The urologist's names of "preliminary film" or KUB are good ones, because they specify a scout 14×17-inch film of the abdomen to reveal radiopaque shadows before injection of opaque medium for excretory urography. In this sense, as pointed out by Dr. Braasch<sup>2</sup> and others, the

<sup>&</sup>lt;sup>1</sup> Etter, L. E.: Bulletin of Allegheny County Medical Society, 46:33, Oct. 1957.

<sup>&</sup>lt;sup>2</sup> Dr. William F. Braasch, Prof. Emeritus, Urology, Mayo Clinic.

phrase IVP for "intravenous pyelography" is a misnomer and should be termed excretory urography or simply urogram since kidney, ureters and bladder may all be shown.

Many may wonder what is meant by a "Bucky film." The Bucky device was invented in 1909, and its description first published in 1913 by Dr. Gustav Bucky¹ of Berlin. It consists of a wafer-thin grid of alternate opaque and non-opaque strips or squares which eliminate stray and scattered radiation and allow only the parallel, penetrating rays to strike the film. Especially useful for thick parts as in GI tract and vertebral column examinations, it is also helpful in providing highly penetrated films of the chest to show details of the trachea and bronchi where there may be a deformity, as in bronchiogenic carcinoma. Equally important for the examination of heavy parts are intensifying screens fitted to the front and back covers of cassettes with film in between. These were devised in 1896 by Dr. Michael Pupin of Columbia University who used fluorescent screens invented by Thomas A. Edison.² They give off visible light when struck by x rays, and thus, greatly intensify or reinforce their effect on the film. In this way, exposure time and x-ray dosage are greatly reduced and definition in heavy parts is improved.

For small parts, such as extremities, "no-screen" film and techniques are used in which the film is placed in a lead-backed cardboard holder. These films show excellent detail and are devoid of excessive contrast which usually results when screens are used for these structures.

There is considerable doubt among doctors as to what exactly is meant by PA and AP radiographs of the chest and abdomen. When referring to the chest, confusion arises from the way one views chest films. Most doctors like to face a patient, as in stethoscopic examination, or looking at him in the fluoroscope. This is natural and correct. But in order to make the film of the chest, we face the patient *toward* the film cassette, with the x-ray tube at his *back*, and make a PA exposure which we then view as if it were AP. Similarly, right or left lateral views and right or left anterior oblique views (RAO, LAO) are made so that when the films are viewed as transparencies, the heart, great vessels, and lungs appear to us as they did in the fluoroscope or as we think of them on our physical examination. Also, PA radiographs of the chest result in less magnification of the heart and great vessels than ones made in the AP direction.

An exception to the above is that of an AP film made in bed. If the patient is unable to sit on the edge of the bed and hold the film in front of him, the exposure must be made with the film at his back and the tube in front of him at a rela-

Bucky, Gustav: A grating diaphragm to cut off secondary rays from the object. Arch. of Roentgen Ray, 18:6-9, 1913.

<sup>&</sup>lt;sup>2</sup> Fuchs, Arthur W.: Edison and Roentgenology: Am. J. Roentgenol., LVII: 2, Feb. 1947.