

Glossary of Medical Devices and Procedures: Abbreviations, Acronyms, and Definitions¹

Tim B. Hunter, MD • Mihra S. Taljanovic, MD

The abbreviations, acronyms, and words included in this glossary represent medical device and procedure terminology found in everyday practice. Also included are many colloquial terms and abbreviations frequently encountered on requisitions for radiologic services or in daily conversation. These terms were purposely included because they are often not defined in standard medical texts or dictionaries. The definitions presented herein are the authors' own, but we believe they conform to general usage. Some meanings vary from locale to locale and from specialty to specialty. Often, terms now in general medical usage originated from the name of a manufacturer or inventor of a particular device. Over time, these terms have acquired a generic meaning of their own, now being applied to a class of devices with the original meaning lost. Examples of this phenomenon include the Jackson-Pratt drain, the Hickman catheter, the Broviac catheter, the Swan-Ganz catheter, the Dobbhoff tube, and the Kirschner wire.

It is surprising that many such terms are not defined or even listed in leading medical specialty textbooks. The package inserts supplied with devices frequently do not cite references that deal with the device's origin, even when the device carries an inventor's name. There has also been a recent pernicious increase in the nonstandardized use of common abbreviations in requests for radiologic procedures. Prime examples include the abbreviations *ASD* and *USA*. *ASD* used to mean "atrial septal defect." Now, it sometimes means "airspace disease." *USA* used to mean the United States of America, but some use it to mean "unstable angina."

The definitions and terms included in this glossary are derived from the authors' own experience, from discussions with many colleagues, and from information contained in many excellent medical terminology texts. This glossary is also an extension of glossaries found in *Radiologic Guide to Medical Devices and Foreign Bodies* (St Louis, Mo: Mosby-Year Book, 1994) and *Medical Devices, Abbreviations, Acronyms and Eponyms: A Pocket Guide* (St Louis, Mo: Mosby, 1994).

Index terms: Radiology and radiologists • U.S. Food and Drug Administration

RadioGraphics 2003; 23:195–213 • **Published online** 10.1148/rg.231025136

¹From the Department of Radiology, University of Arizona Health Sciences Center, 1501 N Campbell Ave, Tucson, AZ 85724. Received August 2, 2002; revision requested August 28 and received September 19; accepted September 23. **Address correspondence** to T.B.H. (e-mail: tbh@3towers.com).

See also the article by Hunter (pp 193–194) in this issue.

©RSNA, 2003

~.—a symbol for “about” or “approximately.”

△.—a symbol for “change” or “diagnosis (dx).”

#.—a symbol for “fracture.”

A

Abbott-Rawson tube.—a double-channeled tube for aspiration of fluid from or injection of fluid into the stomach.

ABF.—aortobifemoral bypass graft or surgery.

Abn.—abnormal.

ACD.—automatic (implantable) cardioverter defibrillator.

ACDF.—anterior cervical (spine) discectomy and fusion.

acorn-tip (acorn-tipped) catheter.—commonly used for any drainage catheter with a bulbous end having the appearance of an acorn. A typical example is a Malecot catheter. Also used for a catheter employed in cystourethrography or retrograde pyelography.

ACR-NEMA Standard.—a detailed specification system for the exchange of information between imaging devices. It has evolved into the DICOM standard. *See also* DICOM, NEMA.

ACUTENS.—acupuncture/transcutaneous-nerve stimulation.

AFB.—aortofemoral bypass graft or surgery.

AICD.—automatic implantable cardioverter defibrillator.

AKA.—also known as.

ALARA.—as low as reasonably achievable.

aliasing MRI wraparound artifact.—*See* wraparound artifact.

allograft.—a tissue graft between donor and recipient of the same species but of disparate genotypes; eg, a cadaver kidney transplant or a kidney transplant from a related donor.

alumina.—aluminum oxide, which occurs in bauxite, rubies, and sapphires.

amalgam.—an alloy of two or more metals, one of which is mercury.

Amplatz filter.—a type of inferior vena cava filter.

AMS 800.—a type of artificial urinary sphincter.

AMS Hydroflex.—a type of penile prosthesis.

AMS 600.—a type of penile prosthesis.

angiocath.—a type of intravenous catheter.

ANSI.—American National Standards Institute, a nongovernmental, voluntary federation of trade associations, professional societies, and individuals. ANSI organizes and publishes national standards.

anterior cervical plates.—a system of plates and screws placed anteriorly in the spine for fixation of unstable spine fractures and dislocations or for stabilization of the spine after surgery.

antibiotic beads.—Any beadlike material impregnated with antibiotics for use in treating bone and joint infections. The beads, typically composed of poly(methyl methacrylate), are packed into the area of infection. The antibiotics help treat the infection, and the bead packing material provides mechanical support in an area of missing or weakened bone.

AO.—Arbeitsgemeinschaft für Osteosynthesefragen (AO), known in English-speaking countries as the Association for the Study of Internal Fixation (ASIF). AO was founded in Europe in 1958 to scientifically study and promote the use of internal fixation for the treatment of fractures.

AO plates, screws, system.—orthopedic apparatus or fixation system designed on the basis of the principles of the AO/ASIF.

arthroplasty.—a generic term for any joint surgery designed to restore joint function. In many cases, a prosthetic device is used to replace the native joint totally or partially. A total arthroplasty involves prosthetic replacement of both sides of a joint, whereas a hemiarthroplasty involves replacement of only one side of a joint, such as a hip bipolar prosthesis.

ASAP.—as soon as possible.

ASD.—used to mean “atrial septal defect.” It has now come to mean “airspace disease” and is increasingly found on radiology requisitions for chest radiographs.

ASFAIK.—as far as I know.

ASIF.—Association for the Study of Internal Fixation. *See also* AO.

ASTM.—American Standards for Testing and Materials.

ATLS.—advanced trauma life support.

augmentation mammoplasty implant.—a general term for a breast implant.

AUS.—artificial urinary sphincter.

Austin-Moore.—eponym for a type of hip prosthesis. In the past, the term has been used in a generic sense to represent any hip implant. Austin T. Moore (1899–1963) performed the first metallic hip replacement in 1942.

autograft.—a graft in which material is transferred from one part of a person's body to another part; eg, bone chips taken from the iliac crest being used for bone grafting in spine surgery.

automatic implantable cardioverter defibrillator (AICD, AID).—a device that consists of sensing and shocking electrodes in the heart or great vessels and a generator implanted in the chest or abdominal wall. It is used for the long-term monitoring of the heart rhythm and the emergency treatment of ventricular arrhythmias.

AVR.—aortic valve replacement.

B

BI, BII.—Billroth I and Billroth II gastric surgeries, respectively.

Barton tongs.—a metallic clamp with tongs applied to each side of the skull for skeletal traction to treat cervical spine injuries.

Bateman bipolar endoprosthesis.—a prosthesis that combines a femoral stem with a free-riding acetabular cup.

Beall valve.—a type of prosthetic heart valve.

beam-hardening artifact.—a type of computed tomographic artifact that occurs because the x-ray beam in CT scanners is not monochromatic and becomes progressively “harder” (of shorter wavelength) as it passes through tissue.

beam-width artifact.—an artifact that may be created by the varying width of an ultrasound beam along its course.

bee cell.—a type of pessary.

BICAP.—*See* bipolar electrocoagulation therapy.

Bilbao-Dotter tube.—an intestinal tube placed into the duodenum or jejunum for the performance of various gastrointestinal radiologic studies, such as hypotonic duodenography or enteroclysis (high enema). The tube is placed with the aid of a stiffening guide wire.

Billroth.—Christian Albert Theodor Billroth (1829–1894) was a famous Austrian surgeon who introduced the most commonly used operations for gastric resection, the Billroth I and Billroth II.

biomaterial.—a material brought into contact with living tissue for the treatment of medical and dental conditions.

Biopty gun.—a type of biopsy gun in which a spring-loaded mechanism is used to rapidly obtain tissue samples with a cutting needle. It is popular for obtaining histologic core bi-

opsy samples from the liver, kidneys, breast, and masses in the abdomen and pelvis.

bipolar electrocoagulation therapy (BICAP).—a form of endoscopic palliation therapy for esophageal neoplasms.

bipolar (hip) prosthesis.—a type of hip hemiarthroplasty. It is a hip prosthesis that combines a free-riding acetabular cup press fit into the native acetabulum. The acetabular cup articulates with a prosthetic femoral head and stem component.

Bird's nest filter.—a type of inferior vena cava filter.

Björk-Shiley valve.—a type of prosthetic heart valve.

BKWP.—below-knee walking plaster.

blade plate.—a type of orthopedic fixation plate with a fixed angled extension at the end of the plate. The extension is typically placed into the metaphysis of the bone undergoing fracture fixation.

BNL.—breast needle localization.

body packers.—*See* mules.

Bohlman technique.—a type of posterior cervical spine fixation that involves the use of interspinous wiring with bone grafting to stabilize the spine.

bone cement.—a biomaterial used to secure a firm fixation of joint prostheses, such as hip and knee joints. It is primarily made of poly(methyl methacrylate) powder and monomer methyl methacrylate liquid.

bone stimulator.—an electronic device used for stimulating bone growth in cases of poor fracture healing and in cases of extensive spine surgery. It consists of a battery pack and one or more leads with bone-stimulating electrodes introduced into the fracture site or bone graft site to stimulate fracture healing or healing of posterior spinal fusion masses. This device may have an appearance similar to that of a spinal column stimulator, though the two are distinctly different devices with different uses.

bovine graft (valve).—a biologic body part derived from a cow. Bovine heart valves are sometimes used to replace diseased human heart valves.

brachytherapy.—a type of radiation therapy in which the source of the ionizing radiation is applied directly to or is only a short distance away from the body area being treated.

BRH.—Bureau of Radiological Health.

Broviac catheter.—a type of central venous catheter. *Broviac* is a trademark of C.R. Bard, Inc. (Tewksbury, Mass.). Dr. J. W. Broviac and associates in 1973 described the use of a silicone rubber atrial catheter for parenteral alimentation. The term *Broviac* is used by some generically to refer to any indwelling central venous catheter.

Buck's traction (extension).—a skin traction system in which a fractured leg is extended and held in traction by weights, with the bed raised at the foot to enable the body to act as a counterweight.

buttress plate.—an orthopedic fixation plate used for bony alignment rather than compression. Typically, buttress plates are used in metaphyseal regions, such as the distal portion of the radius or the proximal portion of the tibia, whereas neutralization plates are used in the shafts of long bones.

butyl cyanoacrylate.—an embolic material used to treat arteriovenous malformations, vascular fistulas, and so forth.

Bx.—biopsy.

C

c̄.—symbol derived from the Latin *cum*, meaning “with,” such as “51-year-old patient c̄ history of heavy smoking.”

CABG.—coronary artery bypass graft procedure.

cage.—*See* vertebral cage.

caliber.—used to express bullet diameter in decimals of an inch or in millimeters.

cancellous bone screw.—a type of bone screw with a smooth shank proximally and coarse threads distally. It is designed to be inserted into cancellous bone. The threads should not cross a fracture line.

cannulated screw.—a type of orthopedic screw that has the same appearance as a standard screw except that the shank is hollow, a feature that allows it to be placed over a guide pin for more exact placement.

Cantor tube.—a type of intestinal drainage tube with a single channel and a weighted mercury bag.

CAPD.—continuous ambulatory peritoneal dialysis.

Carey capsule.—a device used for small bowel biopsy.

Carpentier-Edwards valve.—a type of prosthetic heart valve.

Caspar plate.—the best known of the anterior cervical plates.

cast gold crown.—another term for a dental gold cap.

CCPD.—continuous cyclic peritoneal dialysis.

CDRH.—Center for Devices and Radiological Health.

Celestin tube.—a nylon-reinforced latex tube used to bypass esophageal tumors.

central venous catheter (CVC, CVP).—a type of catheter used for access to the central venous system, usually the superior vena cava or the right atrium. The catheter may be introduced surgically or percutaneously, typically into the subclavian or jugular venous system, though more peripheral access routes may be used. Central venous catheters have one to three separate lumina and are used to measure central venous pressure, to withdraw blood samples, or to administer medications and hyperalimentation. Drs. J. W. Broviac and R. O. Hickman and their associates independently described some of the first applications for such catheters, and their names are often used generically to refer to an indwelling central venous catheter.

ceramics.—inorganic compounds that include silicates, metallic oxides, carbides, and various refractory hydrides, sulfides, and nitrides. Ceramics have extremely low coefficients of friction, making them ideal in certain settings for artificial joint surfaces.

cerclage wires.—circumferential wires used to stabilize long bone fractures. They are often used with intramedullary fixation and work in the same manner as barrel stays.

cerebrospinal fluid shunt.—any type of shunt used to treat hydrocephalus by draining fluid out of the ventricular system of the brain into the vascular system or into a body cavity.

cervicothoracic brace.—a type of brace for external immobilization of the cervical spine.

Charnley-Mueller hip.—refers to one of the first successful hip prostheses. John Charnley (1911–1982), a British surgeon, is considered the father of joint replacement surgery.

chemical shift artifact.—a type of magnetic resonance imaging artifact commonly seen at the interface of fat and soft tissue.

chemotherapeutic infusion pump.—a device for instilling chemotherapeutic agents into a body cavity, such as the peritoneum, or into vessels feeding an abdominal or pelvic malignancy. *See also* intrathecal (drug) delivery pump.

CHIPES.—stands for Chloral hydrate, Heavy metals, Iodides, Phenothiazines, Enteric-coated, Solvents—a mnemonic for the classes of potentially poisonous compounds that are radiopaque.

Cimino-Brescia.—a type of distal radial artery-to-cephalic vein fistula surgically created for reliable vascular access in patients who need long-term hemodialysis.

CLIA.—Clinical Laboratory Improvement Act of 1988.

closed wound suction drains.—drains that offer a constant level of suction, sometimes with a choice of suction pressures.

cloverleaf filter.—a type of inferior vena cava filter.

cochlear implant.—a type of surgically implanted hearing aid used to treat sensorineural hearing loss.

Co-Cr alloy.—cobalt-chromium alloy used as a metallic biomaterial.

Codman Hakim programmable valve.—a type of cerebrospinal fluid shunt used to treat hydrocephalus. It can be reset noninvasively to control a patient's cerebrospinal fluid pressure by regulating the amount of fluid drainage. The valve's pressure settings are adjusted by an external programming device placed near the patient's skull. There is a significant risk that an MR imaging study will reset the opening pressure of the valve; therefore, the valve settings should be reexamined after the patient undergoes MR imaging.

comet-tail (ringdown) artifact.—ultrasound artifact that appears as a line of intense, nearly continuous echoes trailing behind a small reflector or behind the bands of a periodic reverberative artifact. Clinically, the comet tail is seen behind gas collections, areas of cholesterosis, metallic clips, needles, and intrauterine devices.

composite base acrylics.—biomaterials used in tooth-colored restorations and tooth veneers.

compression plate.—*See* dynamic compression plate.

compression screw.—screws that are usually used in the treatment of intertrochanteric and supracondylar femur fractures.

Cope loop catheter.—a type of catheter with a mechanism for holding the distal end of the catheter in a locked pigtail configuration to prevent accidental catheter removal.

Copper T, Copper-7, Copper T380A.—types of intrauterine contraceptive devices.

Cordis sheath.—an access catheter manufactured by the Cordis Corporation (Miami Lakes, Fla). It is basically a thin-walled vascular sheath through which various smaller catheters can be passed. It has come to represent generically any type of sheath that allows access to the central circulation.

cortical bone screw.—a type of fully threaded bone screw designed for use in cortical bone. It uses fine threads to anchor the screw on the near and far cortex of the bone.

Cotrel-Dubousset system.—a complex orthopedic system of rods, hooks, cross-links, and screws for the posterior fixation of the spine.

CPT.—American Medical Association's Physicians' *Current Procedural Terminology*, which is published periodically.

CR.—computed (or computerized) radiography.

CRPP.—closed reduction and percutaneous pinning of a fracture.

Crutchfield tongs.—hinged metal tongs with pointed tips designed to engage the parietal bone of the skull. They are used for cervical traction to treat cervical spine fractures or to stabilize the cervical spine for surgery.

CSGIT.—continuous-suture graft-inclusion technique, for repair of aortic aneurysms and dissections.

Cu-7 IUD.—a type of intrauterine contraceptive device.

CVAC.—central venous access catheter.

CVC.—*See* central venous catheter.

CVP.—central venous pressure.

D

Dacron.—Du Pont's trade name for polyethylene terephthalate polyester fiber. Dacron is a typical condensation polymer and was the first commercial polyester. Sometimes the terms *polyester* and *Dacron* are used interchangeably.

Dalkon Shield.—a type of intrauterine device. It is no longer marketed because of the high number of pelvic complications associated with its use.

DCP.—*See* dynamic compression plate.

dental amalgam.—an amalgam of silver, tin, and mercury used in dental applications for filling of cavities. It may also contain low concentrations of copper and zinc.

dental plate.—a plate containing artificial teeth. It is fitted to the shape of the mouth and is usually constructed from metal or acrylic materials.

dental restorations.—another term for dental fillings.

Denver shunt.—a pleuroperitoneal shunt for use in patients with intractable pleural effusion.

Deyerle apparatus.—an apparatus with multiple fixation pins and a side plate. It is used for intracapsular hip fractures.

DHS.—dynamic hip screw.

DHT.—Dobhoff or similar “feeding tube.”

Diamond tube.—a tube, similar to the Abbott-Rawson tube, used for study of the small intestine.

DICOM.—Digital Imaging and Communications in Medicine, a detailed specification standard for the exchange of digital images and data between imaging devices. It is an evolution of the ACR-NEMA Standard.

Dobhoff tube.—a type of feeding tube developed by Drs. Dobbie and Hoffmeister. It is now a generic term for any small feeding tube.

Dome card.—refers to one of the video graphics cards manufactured by Dome Imaging Systems (Waltham, Mass). Dome cards are often used in PACS systems. The term has come to generically refer to any high-performance graphics system.

dome port.—a type of vascular access port.

Doppler phenomenon.—an eponymous term to describe the apparent change in frequency of a waveform, such as light or sound, whenever the wave source and an observer are in motion relative to each other. If the source and the observer are moving together, the observed frequency is higher than the emitted frequency. If they are moving apart, the observed frequency is lower than the emitted frequency. An important example of the latter case is the “red shift” of visible light and other electromagnetic radiation from distant galaxies, which are receding from our own galaxy, the Milky Way, because of the expansion of the universe. The Doppler phenomenon is used in many medical applications such as color Doppler ultrasound. The phenomenon is named after Christian Doppler (1803–1853), an Austrian physicist and mathematician who first described it.

dorsal column stimulator.—a type of spinal column stimulator used to reduce chronic pain or muscle spasticity. *See also* spinal column stimulator.

double J stent.—*See* JJ stent.

double-lumen endotracheal tube.—a tube used for differential ventilation of the two lungs to accommodate differences in compliance between them.

DR.—digital radiography.

Dual MicroPort, Dual MacroPort.—types of vascular access ports.

DuraPhase.—a type of penile prosthesis.

Dutoit staple.—a long, slender orthopedic staple for anchoring ligaments and tendons to bone. It is most commonly used as part of a repair for recurrent anterior shoulder dislocations.

Dwyer-Zielke (Zielke) system.—a complex orthopedic spine-fixation system used for correcting thoracolumbar scoliosis.

Dx.—diagnosis or disease.

dynamic compression plate (DCP).—an orthopedic fracture fixation plate with oval holes designed to provide compression of the fracture as eccentrically placed screws are tightened on either side of the fracture line. DCPs are designed to compress fracture fragments together rather than merely hold them in contact. They are typically used for fractures that are stable.

dynamic hip screw, dynamic compression screw.—a dynamic hip screw (and sliding nail plate device) that is part of a fixation system to treat intertrochanteric fractures. There is a side plate, which contains a barrel through which a lag screw can slide. The gliding motion of the lag screw is designed to prevent the screw from perforating the femoral head and entering the hip joint space as the fracture fragments settle. The device also provides fracture fragment compression at the time of its initial placement.

E

ED.—emergency department, external device.

EF.—external fixation.

Eggers plate.—a slotted metallic bone plate designed for maintaining approximation of bone fragments.

elastomer.—an elastic, rubberlike substance such as a synthetic rubber or a plastic having some of the physical properties of natural rubber.

Enders nails.—small, flexible intramedullary nails used for fixation of long bone shaft fractures.

endoprosthesis.—sometimes applied to a hip prosthesis that consists of a single piece: a press-fit stem with a ball that matches the diameter of the native acetabulum.

endotracheal tube.—a tube placed in the trachea to control respiration.

Entriflex tube.—a type of feeding tube.

En-tube-Plus.—a type of feeding tube.

ER.—emergency department, emergency room, erectile dysfunction.

ERCP.—endoscopic retrograde cholangiopancreatogram or cholangiopancreatography.

ESKA Jonas Silicone-Silver.—a type of malleable penile prosthesis.

esophageal stent.—a stent used in the esophagus to traverse tumors or strictures.

ESWL.—extracorporeal shock wave lithotripsy.

ET.—external, endotracheal tube, examination terminal.

ETT.—endotracheal tube, exercise tolerance test.

Ewald tube.—a large-bore gastric tube for evacuation and lavage of the stomach. It is typically used in cases of poison ingestion.

ext.—external.

F

F, Fr.—See French scale.

FB.—foreign body.

FDA.—United States Food and Drug Administration.

Federal Hydrashok bullet.—This .45-caliber bullet often produces characteristic fragments when it deforms in body tissues. It has a hollow point and a post in the center. The copper jacket forms the rim of the bullet tip.

fine needle aspiration (FNA), fine needle aspiration cytology (FNAC), fine needle aspiration biopsy (FNAB).—a popular procedure in which a small needle, typically 20–23 gauge, is introduced into a lesion and a few cells are aspirated for cytologic examination.

Finney Flexi-Rod (Flexirod).—a type of penile prosthesis.

Fish viscera retainer.—a metallic device used to contain viscera inside the abdominal cavity during abdominal surgery.

fixation screws (bone screws).—any type of screw used to approximate two pieces of bone or to attach a plate or rod to a bone.

fixation wire.—any type of wire used to approximate one or more pieces of fractured bone.

Flexi-Flate.—a type of penile prosthesis.

Flexiflow tube.—a type of feeding tube.

FMC.—full metal case, synonymous with full metal jacket.

FNA, FNAB, FNAC.—See fine needle aspiration.

focal zone banding.—a sonographic artifact that results from the ultrasound beam having varying intensities along its course.

fold-in, foldover artifact.—See wraparound artifact.

Foley catheter.—a balloon-tipped catheter used in the urinary bladder.

four-poster brace.—a type of brace used for external immobilization of the cervical spine.

Fr, F.—See French scale.

Frederick Miller tube.—a type of intestinal feeding tube.

French scale.—a common scale used for denoting the diameter of catheters, tubes, and sounds. Each French unit approximates 0.33 mm in diameter; therefore 18 French is equivalent to a diameter of 6 mm.

FT.—feeding tube.

full metal case (FMC), full metal jacket, ball bullet.—a type of bullet in which a metal jacket completely covers the bullet tip. Full metal jacket bullets typically penetrate at least 10 cm before the bullet yaws. With this type of bullet, a large temporary cavity forms only after significant yaw. Under the terms of The Hague Convention of 1899, the jacket of a military bullet must completely cover the bullet tip.

Fx.—fracture.

G

Gardner-Wells tongs.—a rigid, semicircular device that contains tongs applied to each side of the skull for skeletal traction to treat cervical spine injuries.

gastrostomy tube.—a tube surgically, percutaneously, or endoscopically placed into the stomach through the anterior abdominal wall and used for long-term administration of feedings.

gauge, gage.—the diameter of a slender object; the instrument for measuring and having a graduated scale; the size of a shotgun expressed as the number of lead balls to fit the inner diameter of a barrel to make a pound.

GCS.—See Glasgow coma scale.

Gehrung.—a type of pessary.

Gelfoam.—an absorbable gelatinous material used for hemostasis. It may be applied directly to a wound or injected intravascularly.

Gellhorn.—a type of pessary.

geometric artifact.—See linear artifact.

Gianturco-Rosch Z-stent.—a type of self-expanding metallic stent composed of round stainless steel. It is used in the vascular and biliary systems to buttress areas of narrowing or obstruction.

Gibbs (truncation) artifact.—a frequency artifact produced by magnetic resonance imaging that is similar to chemical shift and magnetic artifacts. Gibbs artifacts are bright or dark lines parallel to borders of abrupt signal intensity changes. A Gibbs artifact may, for example, simulate a syrinx in the cervical spinal cord. Gibbs artifact is worse on coarse-matrix MR images (such as 128×128). Josiah W. Gibbs (1839–1903) was a distinguished American physicist and chemist.

Glaser safety slug.—a type of bullet consisting of hundreds of pellets of number 12 bird shot in a copper cup with a nonradiopaque fiberglass-Teflon cap.

Glasgow coma scale (GCS).—a standardized system for evaluating levels of consciousness and neurologic status.

Gore-Tex.—a trademark of W. L. Gore (Elkton, Md). It is a fluorocarbon polymer and is similar chemically to Teflon (polytetrafluoroethylene). Gore-Tex is best known for its use in sportswear, but it has also been utilized in the production of synthetic ligaments and other medical devices.

Gortex.—a corrupt spelling of Gore-Tex.

gossypiboma.—used to describe the foreign-body reaction that develops around a retained surgical sponge.

GRAE.—generally regarded as effective.

GRAS.—generally regarded as safe.

Gravigards.—a type of intrauterine contraceptive device.

gravity drains.—surgical drains that rely on gravity and fluid-tension dynamics to drain fluids away from surgical beds and help tissue approximation and wound healing.

gravity suit (G suit).—a compression suit applied to a patient to control bleeding.

Greenfield filter.—a type of inferior vena cava filter for use in the prevention of clot propagation to the lungs.

Groshong catheter.—a specialized type of central venous catheter with a three-position valve near its tip. The valve allows fluid flow into and out of the catheter but remains closed when the catheter is not in use. This type of catheter does not require routine clamping or flushing with a heparin solution to keep it free of blood clots. It does require flushing with 0.9% normal saline solution on a periodic basis.

Grosse-Kempfe interlocking nail.—a type of intramedullary fracture fixation rod.

GSW.—gunshot wound.

GT.—gastrostomy tube.

G-tube.—gastrostomy tube.

Gunther filter.—a type of inferior vena cava filter for use in the prevention of clot propagation to the lungs.

H

Hagie pin.—a partially threaded orthopedic fixation pin designed for hip fractures.

Halifax clamps.—a type of interlaminar clamp for posterior cervical spine fixation. Halifax clamps are generally used to stabilize a single level and are used in combination with bone grafting.

Hall-Kaster valve.—a type of prosthetic heart valve.

Halo vest.—an external cervical immobilization device used for unstable fractures and dislocations. A metallic ring (the halo) is fixed to the outer table of the skull with screws. The halo is connected to a padded fiberglass or plastic thoracic cast by means of metal rods (struts).

Hancock (porcine) valve.—a type of prosthetic heart valve manufactured from pig heart valves.

Hansen-Street nail.—a solid intramedullary nail used for femoral shaft fracture fixation.

Harrington rod.—a device that uses hooks in the lamina and facet joints of the spine to support the spine in cases of fracture, infection, and tumor.

Harris tube.—a single-lumen tube with a mercury weight used in the study of the small intestine. Its head is similar to that of the Miller-Abbott tube.

Hawkins catheter.—a self-retaining accordion catheter that assumes a Z configuration after the self-retaining device has been engaged.

HC.—See Hickman catheter.

hemiarthroplasty.—an arthroplasty that involves only one side of a joint.

hemoclips.—surgical clips of various sizes used to occlude bleeding vessels.

Herbert screw.—a modified orthopedic screw that was originally developed for the fixation of scaphoid fractures. It is cannulated and has threads on both ends and an unthreaded central shank. The pitch of the threads is different on each end, which draws the fracture fragments together as the screw is being placed.

heterograft.—a graft of tissue or an organ from one species to another species.

Hickman catheter.—a type of central venous catheter introduced by Dr. R. O. Hickman. It is a trade name of C. R. Bard, Inc. (Tewksbury, Mass) and is often used as a generic term for any central venous catheter.

HLTx.—heart and lung transplant.

hollow point bullet.—bullets with a hole in the jacket at the tip. The bullet is designed to deform into a mushroom shape in tissue to maximize tissue damage.

Holt nail-plate.—A type of fixed angle nail-plate used to treat hip fractures.

homograft.—a graft of tissue or an organ from a donor of the same species as the recipient. Sometimes considered to be synonymous with *allograft*.

HPD.—home peritoneal dialysis.

Hulka clip.—a clip designed for tubal ligations.

Hydrashok bullet.—See Federal Hydrashok bullet.

Hydroflex (AMS Hydroflex).—a type of penile prosthesis.

hydroxyapatite.—a fundamental inorganic constituent of bone matrix and teeth. It contains calcium, phosphate, and hydroxyl ions and is usually found in a crystalline form with a specific lattice configuration. Hydroxyapatite can also be manufactured as a bioactive ceramic material, which will form chemical bonds with bone.

hydroxyapatite implant.—a type of implant used to supplement bone defects in the jaw and facial bones.

I

IAB (intraaortic balloon), IABP (intraaortic balloon pump).—See intraaortic counterpulsation balloon.

IACB (IAC).—See intraaortic counterpulsation balloon.

IACD, ICD.—implantable (automatic) cardioverter-defibrillator device; the same as an automatic implantable cardioverter defibrillator (AICD).

Id.—*idem*; Latin for “the same.”

ID.—identification, infectious disease, inside diameter, intradermal.

i.e.—*id est*; Latin for “that is.”

IF.—internal fixation, interstitial fluid, interventional fluoroscopy, intrinsic factor.

Ileo-B pouch.—a pouch device for collecting fluids from an ostomy site.

Ilizarov technique.—used most often in reconstructive settings to lengthen limbs, transport bone segments, and correct angular deformities. This technique was developed by Gavriil Abramovich Ilizarov (1921–1992) through many years of hard work and experimentation under difficult conditions in an isolated Siberian hospital during the 1940s and 1950s.

ILV.—independent lung ventilation, a system or device for ventilating the lungs independently of each other.

IMACS.—image (management) archiving and communications system; the same as PACS.

immobilization device.—any device to immobilize a patient so that a procedure may be performed. Typical examples include a head holder for cranial computed tomographic studies and a Pigg-O-Stat device to restrain a child for chest radiography.

implant.—generic term used for materials or devices placed in vivo for the treatment of medical or dental conditions.

Implantofix II.—a type of vascular access port.

Infusaid Model 400, Infusaid Model 600.—types of vascular access ports.

injection artifacts.—a type of nuclear medicine artifact that originates from the injection of radiotracer.

interfragmentary (lag) screw.—an orthopedic screw that crosses a fracture line.

interlocking screws.—screws used with intramedullary rods to “lock” the rods in place for control of fracture-fragment rotation and shortening.

intestinal tube.—any type of tube used to decompress the stomach or large or small bowel, to obtain fluid samples, or to provide an access route for patient nutrition.

intraaortic counterpulsation balloon device (IACB, IAB, IABP, IAC).—used to support the circulation after cardiac surgery or acute myocardial infarction until the heart recovers adequate function of its own. The balloon is situated in the descending aorta just below the arch. It inflates during diastole and deflates during systole, thereby assisting blood flow into the coronary arteries during diastole and the systemic circulation during systole.

intracranial aneurysm clip.—a surgical clip used to occlude an intracranial aneurysm.

intramedullary rod.—an orthopedic rod inserted into the medullary space of a long bone to help with fracture fixation.

intrathecal (drug) delivery pump.—device that consists of a battery-operated pump placed in a subcutaneous pocket and connected to a catheter situated in the spinal subarachnoid space. It is used for delivery of a carefully controlled volume of medication to the spinal cord and nerve roots. The medication may be a chemotherapeutic agent or an analgesic agent, depending on the patient's condition. The pump can be refilled via a needle inserted into an access port in the pump, which lies just under the skin. Chemotherapeutic infusion pumps have a similar design and can be used to introduce chemotherapeutic agents into a variety of locations, such as the peritoneal cavity or the vasculature feeding an abdominal or pelvic malignancy.

intrauterine contraceptive device (IUD).—a small device placed in the uterus to prevent unwanted pregnancy. IUDs are popular contraceptive means in most of the world.

IOFB.—intraocular or intraorbital foreign body.

Ionescu-Shiley valve.—a type of prosthetic heart valve.

IPD.—intermittent peritoneal dialysis.

IPOP.—immediate postoperative period or immediate postoperative prosthesis.

IPPB.—intermittent positive-pressure breathing.

IPPF.—immediate postoperative prosthetic fitting.

IPPV.—intermittent positive-pressure ventilation.

iron poisoning.—a common type of poisoning in pediatric patients, who are highly sensitive to iron compounds. Iron poisoning is a large problem in the pediatric age group because iron-containing medications are so widely used, and adults usually do not appreciate the potential toxicity of iron tablets.

I-S.—Ionescu-Shiley prosthetic heart valve.

ISO.—International Standards Organization, formed after World War I to coordinate equipment and later software standards worldwide.

IUD, IUCD.—See intrauterine contraceptive device. *IUD* can also mean intrauterine death.

IVC.—inferior vena cava.

J

Jackson-Pratt drain.—a flat, fenestrated, closed-wound surgical drain.

Jarvik heart.—a pneumatically driven biventricular device invented at the University of Utah. It completely replaces the native heart within the pericardial sac.

JCAHO.—Joint Commission on Accreditation of Healthcare Organizations.

jejunostomy tube.—a tube surgically or percutaneously placed into the jejunum through the anterior abdominal wall and used for long-term administration of feedings.

Jewett nail and Jewett plate.—used together for internal fixation of an intertrochanteric hip fracture.

JJ stent (double J stent).—an internal drainage catheter with curves at both ends. It is sometimes used for percutaneously placed ureteral stents.

Jonas penile prosthetic implant.—a type of penile prosthesis.

JP, JP-drain, JP-tube.—See Jackson-Pratt drain.

J-tube.—jejunostomy tube.

J wire.—a common angiography guide wire with a curved, j-shaped end.

K

Kalke-Lillehei valve.—See Lillehei-Kaster valve.

Kaneda device.—a spinal fixation device designed to facilitate one-stage treatment of thoracolumbar lesions.

Kimray-Greenfield (K-G) filter.—a type of inferior vena cava filter used to prevent clot propagation to the lungs.

Kirschner wire (K wire).—a wire commonly used for fixation of fracture fragments during fracture reduction and skeletal traction. *K wire* has become a generic term for any type of wire or pin fixation of a fracture. The Kirschner wire was developed by Martin Kirschner (1879–1942), a German surgeon, who introduced the use of wire skeletal traction in 1909.

Knodt rod.—a type of orthopedic fixation rod used for spine reconstruction.

Knowles pin.—a type of orthopedic fixation pin.

KTx.—kidney transplant.

Kuntscher nail.—a type of intramedullary nail for the fixation of fractures. The first practical use of “rods” and “nails” to treat long bone fractures was performed by Gerhard Kuntscher (1900–1972) in 1940 while he served in the German army.

Kurosaka screw.—a short, broad, headless orthopedic screw designed to anchor anterior cruciate grafts in the metaphysis of the tibia and femur.

K wire.—See Kirschner wire.

L

LAC.—left atrial catheter.

lag screw.—an orthopedic screw that provides compression across a fracture line.

Lane plate.—a metallic bone plate used for fracture fixation.

latex.—a suspension in water of particles of natural or synthetic rubber or plastic; used in rubber goods, adhesives, paints, and so on.

LCDCP.—low-contact dynamic compression plate, a type of orthopedic compression plate designed to preserve periosteal blood supply.

Leinbach prosthesis.—a proximal femoral implant replacement device for the femoral head, neck, and trochanteric regions.

Le Vein shunt.—a peritoneal jugular shunt designed to drain ascitic fluid from the peritoneal cavity to the central venous system.

Levin tube.—a small-bore nasogastric tube.

LGM, Vena Tech/LGM.—a type of vena cava filter.

Lifeport.—a type of vascular access port.

light-bulb effect.—a type of computed radiographic artifact. The lower, outer portions of an image appear darkened relative to the remainder of the image because of backscattered radiation entering the photostimulable phosphor imaging plate from the patient's bed or other object.

Lillehei-Kaster valve, Lillehei-Nakib valve, Kalke-Lillehei valve, St. Jude bileaflet prosthesis.—types of prosthetic heart valves developed under the tutelage of C. Walton Lillehei (1918–1999). Lillehei is known as the father of open-heart surgery for his pioneering work in developing open-heart surgery techniques, artificial valves, and heart pacemakers. In 1955, Richard A. DeWall and Lillehei developed the first practical heart-lung machine.

linear artifact.—a type of computed tomographic artifact seen at the edges of tissues with different attenuation, such as the junction of the dome of the liver and the lung base.

Lippes loop.—a type of intrauterine contraceptive device.

liquid adhesives (glue).—gluelike biomaterials sometimes used to treat arteriovenous malformations, high-flow vascular fistulas, and brain tumors.

Lottes nail.—a triflanged intramedullary nail used for closed fixation of tibia fractures.

Luque rods (wires).—an orthopedic fixation system used for spine surgery. It provides

segmental posterior stabilization of the lumbar or thoracic spine by means of sublaminar wires to anchor rods.

LVAD.—left ventricular assist device. *See* ventricular assist device.

M

MacroPort.—a type of vascular access port.

Maglinte tube.—an intestinal tube placed in the duodenum or jejunum for performing enteroclysis. It has an expandable balloon used to occlude the bowel lumen to prevent reflux of fluid into the stomach.

magnetic susceptibility artifact.—a form of chemical shift artifact in which artifacts may be attributable not to a difference in the frequency precessions of fat and water but to the magnetic susceptibilities of different materials, inhomogeneity in the static field, the presence of magnetic materials, or all three. Magnetic artifacts are projected along the frequency-encoding axis and may have comet-tail appearances, depending on the shape of the magnetic inhomogeneity.

Malecot catheter.—a catheter with a bulbous tip composed of two or four wings.

malleolar bone screw.—a type of cortical bone screw with a self-tapping thread.

mammary prosthesis.—a breast augmentation-reconstruction implant.

Marmor hemiarthroplasty.—a type of hemiarthroplasty used in the knee.

Massie nail.—a telescoping nail-plate assembly used to treat intertrochanteric hip fractures.

MAST suit.—military antishock trousers.

McGlaughlin nail.—a nail designed for use with a side plate for fixation of intracapsular and intertrochanteric hip fractures.

McLean Ringer tube.—a type of feeding tube.

Medtronic Hall valve.—a type of prosthetic heart valve.

Mentor GFS.—a type of penile prosthetic implant.

Mentor "3-piece."—a type of penile prosthetic implant.

Methacrylate.—*See* poly (methyl methacrylate).

MicroPort.—a type of vascular access port.

Miller-Abbott tube.—a type of intestinal drainage and decompression tube with a weighted mercury bag and two channels.

Milwaukee brace.—an external brace used to stabilize or correct spine deformities in skeletally immature patients.

Minnesota tube.—a complex, multiple balloon tube similar to a Sengstaken-Blakemore tube. It is used to treat esophageal or stomach varices.

mirror imaging artifact.—a type of ultrasound artifact that may be created adjacent to a highly reflective acoustic interface.

Mobin-Udin umbrella.—a type of inferior vena cava filter used to prevent clot propagation to the lungs.

modular spine-fixation system.—a spine-fixation system using pedicle screws, distraction hooks, intermediate screws, and a universal rod.

Moe plate.—a metallic bone plate used for fixation of an intertrochanteric femur fracture.

Morscher plate.—an anterior cervical spine-fixation system using a plate and a hollow screw.

MRI port.—a type of vascular access port.

mules (also known as “body packers”).—people who smuggle drugs by ingesting or inserting into their rectum or vagina drug filled-packets. The packing material is typically a condom or balloon, and the packets vary in their relative radiopacity.

Multiload-250.—a type of intrauterine contraceptive device.

MVR.—mitral valve replacement.

Mx.—mastectomy.

N

Napier.—a type of pessary.

nasogastric tube.—a generic term for any rubber or plastic tube used for decompression of the stomach.

NB.—nota bene; Latin for “note well.”

NCRP.—National Council on Radiation Protection and Measurement.

NDT.—nondestructive testing.

needle gauge.—See gauge.

NEEP.—negative end-expiratory pressure.

Neer prosthesis.—a type of shoulder prosthesis.

NEFT.—nasoenteric feeding tube.

Neibauer prosthesis.—a type of prosthesis used in the joints of the hand.

NEMA.—National Electrical Manufacturers Association, National Eclectic Medical Association.

nephrostomy tube.—a tube placed into the pelvis of the kidney for the external drainage of urine.

Neufeld nail.—a device designed for internal fixation of intertrochanteric femur fractures.

neutralization plate.—an orthopedic fixation plate used with interfragmentary (lag) screws to protect the screw fixation by neutralizing various mechanical stresses at the fracture site. Neutralization plates are typically used in the shaft of long bones. They stabilize the bone fragments but do not compress the bones together, unlike dynamic compression plates.

NG tube.—nasogastric tube.

NIH.—National Institutes of Health.

Nissen fundoplication.—a surgical procedure to prevent gastroesophageal reflux.

Nissenkorn prosthesis.—an endourethral prosthesis used to relieve urinary retention in high-risk surgical patients.

nitinol filter.—a type of inferior vena cava filter used to prevent clot propagation to the lungs. Also called Simon Nitinol filter.

NMR.—nuclear magnetic resonance. A synonym for magnetic resonance. The name NMR imaging was changed to magnetic resonance imaging in part because the term *nuclear* has an unpleasant connotation in some circles.

No Δ.—commonly scribbled on the front of film jackets by busy radiologists. It means “no change from previous examination.”

NOMS.—not on my shift. It has a connotation similar to that of *NIMBY* (not in my backyard).

Norian SRS Cement.—a bone graft substitute that is a registered trademark of Norian Corporation (Cupertino, Calif). It was initially developed for stabilization of distal radial fractures, and it consists of a moldable cement that hardens in vivo, forming a carbonated apatite crystalline material that is later resorbed.

Norport-AC, -DL, -LS, -PT, -SP.—types of vascular access ports.

Novacor.—a type of ventricular assist device.

Nova T IUD.—a type of intrauterine contraceptive device.

nylon.—the first commercial polymer, made in the 1930s. *Nylon* is now used as a generic term for a family of polyamide polymers. These polymers are used to make fibers, fabrics, and extruded forms.

O

OD.—outside diameter, overdose, or right eye (oculus dexter).

OKA.—otherwise known as. Same as AKA.

oleo plombage.—See wax plombage.

Omnicarbon valve.—a type of prosthetic heart valve.

OmniPhase.—a type of penile prosthesis.

Omniscience valve.—a type of prosthetic heart valve.

OOP.—out of plaster. It should not be confused with *oops*.

OREF.—open reduction and external fixation.

ORIF.—open reduction and internal fixation.

Orion plate.—a type of anterior cervical spine fusion plate.

orogastric tube.—any tube going into the stomach through the mouth rather than through the nose (a nasogastric tube).

orotracheal tube.—a tube inserted in the mouth to keep the mouth open and the teeth from biting the tongue.

OSHA.—Occupational Safety and Health Administration.

osseointegration.—chemical bonding between living bone and an implant.

OSTEOSET Bone Graft Substitute.—a registered trademark of Wright Medical Technology, Inc. (Arlington, Tenn), a bone graft substitute composed of calcium sulfate.

OTC.—over the counter. It is used in reference to drugs and medical equipment that may be bought without a prescription.

OTW.—off-the-wall; a phrase used to mean unexpected, bizarre.

P

P & V.—pyloroplasty and vagotomy.

PAC.—pulmonary artery catheter. *See also* Swan-Ganz catheter. Also may mean premature atrial contraction.

PACS.—picture archiving and communications system.

Palmaz endovascular stent.—a type of stainless steel vascular stent used to maintain the lumen in narrowed vessels and ducts. It is now also used in other applications such as portacaval shunts.

Pantopaque.—an oil-based myelographic contrast agent. It is not miscible with water and is no longer used, having been replaced by low-osmolar water-soluble agents. It is very slowly absorbed and remains radiographically visible for years.

particle reinforcement.—a technique used to improve the properties of bone cement. For example, inclusion of bone particles in PMMA cement somewhat improves its stiffness and considerably improves its fatigue life.

PDQ.—pretty darn (damn) quick; similar in meaning to ASAP.

Peel-Away (introducer, sheath).—a registered trade name of Cook, Inc (Bloomington, Ind), often used generically for any type of introducing catheter or sheath that aids in

the placement of an indwelling catheter or tube. Near the end of the procedure, the introducer is peeled off the permanent catheter and discarded.

PEEP.—positive end-expiratory pressure.

PEG tube.—a gastrostomy tube placed by means of percutaneous endoscopic technique.

Penrose drain.—a traditional type of gravity drain, it is also convenient for use as a tourniquet. Penrose drains are often made from soft latex rubber to lessen wound irritation.

peritoneal jugular (LeVeen) shunt.—a shunt designed to drain fluid from the peritoneal cavity to the central venous system.

pessary.—a simple mechanical device inserted in the vagina for the treatment of vaginal and uterine prolapse.

Philadelphia collar.—a type of cervical immobilization collar molded from plastic. It has chin and occipital supports.

PIC, PICC, PPC.—peripherally inserted (central) catheter. These small catheters are peripherally inserted near the antecubital fossa with the tip in the superior vena cava.

pigtail.—used to describe the appearance of the end of a drainage catheter or angiography catheter with a curvature similar to that of a pig's tail.

Ping-Pong ball plombage.—a type of chest treatment used for tuberculosis in the era before antibiotics.

platinum metals.—platinum, ruthenium, rhodium, palladium, osmium, and iridium. These expensive metals are sometimes used in alloys for surgical implants.

PM.—pacemaker.

PMMA.—*See* poly(methyl methacrylate).

PND.—percutaneous needle drainage.

po.—*per orem*; Latin for “by mouth.”

polycarbons (polycarbonates).—high-strength polymeric thermoplastic materials that match the properties of light metals. They have a resistance to most chemicals and to water over wide temperature ranges.

polyester (fiber).—long-chain polymeric compound produced by the combination of an ester of a dihydric alcohol (usually ethylene glycol) and terephthalic acid. Dacron was the first commercial polyester fiber, and the terms *Dacron* and *polyester* are often used interchangeably. A polyester fiber is strictly defined as a synthetic fiber containing at least 80% polyester compounds.

polyethylene (PE).—a simple polymer made from ethylene (CH₂=CH₂).

polymer.—(poly = “many”; mer = “part”) molecules linked together in long chains by the primary covalent bonding in the main backbone chain with C, N, O, Si, and so forth, as side atoms.

poly(methyl methacrylate), PMMA.—an acrylic polymer used in a variety of prostheses. *Poly-methylmethacrylate* or *methacrylate* are the terms most commonly used to describe PMMA, though they are less chemically correct.

polytetrafluoroethylene (PTFE), polytef.—chemical name for Teflon and Gore-Tex.

POOH.—Postoperative open-heart surgery.

POP.—plaster of Paris, progesterone only pill.

porcelain veneer crown.—a porcelain tooth cap.

porcine graft (valve).—a biologic body part derived from a pig.

Port-A-Cath.—a type of vascular access port. This term has come to be used generically for any type of vascular access port with a subcutaneous reservoir for injection of medication.

Portacath.—a corrupted spelling of Port-A-Cath.

Portnoy shunts.—a type of ventriculoperitoneal shunt.

posterior cervical plates.—a system of plates and screws placed posteriorly for fixation of unstable spine fractures and dislocations or to stabilize the spine after surgery.

posterior spinal instrumentation (fixation).—a generic term used for a wide variety of wires, rods, plates, and screws designed for thoracic or lumbar spine stabilization after surgery to correct severe traumatic, congenital, or developmental spinal abnormalities. There are many different posterior spinal instrumentation designs, some of the more common being Luque and Hartshill rectangles; Harrington and Knodt rods; and Steffe, Edwards, Roy Camille, Texas Scottish Rite Hospital (TSRH), and Cotrell-Dubousset pedicle fixation systems.

posterior wiring.—a method of providing spinal fixation with posteriorly placed stabilizing wires or plates. Luque and Hartshill rectangles are types of spinal fixation plates sometimes used with sublaminar wires.

PP.—percutaneous pinning, percutaneous pin.

PPE.—personal protective equipment, such as gloves, mask, and gown, used for handling dangerous chemicals, blood products, and bodily fluids.

PPM.—permanent pacemaker.

PR.—*per rectum*; Latin for “via the rectum.”

PRN.—*pro re nata*; Latin for “as necessary.”

progestasert.—a type of intrauterine contraceptive device.

prosthesis.—artificial substitute for a missing body part. Sometimes the terms *prosthesis*, *implant*, and *medical device* are used interchangeably.

PSC.—percutaneous suprapubic cystostomy.

PSIF.—posterior spinal instrumentation and fusion.

PTBD (PTHBD).—percutaneous transhepatic biliary drain.

PTFE.—polytetrafluoroethylene, the parent compound for Gore-Tex and Teflon.

Pudenz-Shultz ventricular access catheter.—a type of ventriculoperitoneal shunt.

PVR.—pulmonary valve replacement, peripheral vascular resistance.

PZT.—lead zirconium titanate, a crystal piezoelectric material found in ultrasound transducers.

Q

QED.—*quod erat demonstrandum*; Latin for “that which was to have been shown.”

Q-Port.—a type of vascular access port.

R

radiopaque.—used to describe the ability of a substance to absorb x rays and appear opaque (white) on radiographs.

rayon.—any of a group of smooth textile fibers made in filament and staple form from cellulosic material by means of extrusion through minute holes.

reconstruction breast prosthesis.—a breast implant (prosthesis) used to reconstruct a breast after mastectomy.

reconstruction plate.—a type of orthopedic fixation plate that is notched between the holes, allowing it to be bent or contoured in three planes. These plates are commonly used to accommodate the complex anatomy of pelvic fractures.

reconstruction rod.—a type of orthopedic rod used to treat fractures of the femoral neck, intertrochanteric, or subtrochanteric areas. These rods have proximal locking holes oriented to allow screws to be placed into the femoral neck and head.

resin base acrylics.—biomaterials used in dentures, removable orthodontic appliances, bite guards, temporomandibular joint orthotic appliances, temporary crowns or bridges, and denture teeth.

retaining plate.—an orthodontic appliance.

reverberation bands.—a type of ultrasound artifact in which bright parallel lines or bands occur at regular intervals on an ultrasound image.

reverberation pseudomass.—an ultrasound artifact in which multiple reverberating echoes from a gas-filled or fluid-filled structure can simulate a mass.

ring artifact.—a type of computed tomographic artifact usually caused by a faulty detector producing rings or concentric circles on computed tomographic images.

ringdown artifact.—See comet-tail artifact.

RND.—radical neck dissection.

road rash.—used by emergency room and trauma team personnel to describe the gravel, broken glass, dirt, and other debris that becomes embedded in the skin and soft tissues of motor-vehicle, bicycle, moped, motorcycle, and pedestrian accident victims. Some of the debris, such as glass and gravel, is radiopaque and will be visible on conventional radiographs.

ROM.—removal of metal, range of motion, read only memory, range of movement, reduction of movement, rupture of membranes.

ROP.—removal of pins, plaster.

round CT static artifacts.—a film-related artifact. Round computed tomographic film static artifacts are seen as spotlike or smudge-like areas of low opacity on film. They are created by static electric discharges at points of contact between film and cassettes.

RPG.—retrograde percutaneous gastrostomy.

RPN.—resident progress note. There is no standard abbreviation for “attending physician progress note,” since, until recently, attending physicians were not accustomed to writing progress notes.

RUA.—reduced under anesthesia.

rubber.—substance defined by the American Standards for Testing and Materials (ASTM) as “a material which at room temperature can be stretched repeatedly to at least twice its original length and upon release of the stress, returns immediately with force to its approximate original length.”

Rush pin.—a type of orthopedic fixation pin with sled-runner tip and hooked ends.

Rx.—treatment.

S

s̄—abbreviation for “without” (from the Latin preposition *sinē*).

Saf-T Coil.—a type of intrauterine contraceptive device.

Sage nail.—a solid nail used for intramedullary fixation of the radius and ulna.

Sampson nail (rod).—hollow cylindrical rod with multiple external flutes. It is used to treat femoral shaft fractures.

SAPF.—simultaneous anterior and posterior (spinal) fusion.

SATL.—surgical Achilles tendon lengthening.

Schanz screw.—a type of screw used for external fixation of fractures.

Schneider nail.—a four-flanged intramedullary nail used for femoral shaft fractures.

Scott inflatable prosthesis.—a type of penile prosthesis.

SE.—See Starr-Edwards (heart) valve.

Seldinger technique.—a percutaneous technique for the introduction of catheters and tubes. It avoids the need for a cutdown and employs the use of a guide wire.

Sengstaken-Blakemore tube.—a complex device for controlling bleeding esophageal varices. There are three lumina, one of which is used to inflate a stomach balloon for holding the device in place and for tamponing bleeding vessels in the cardia of the stomach. A second lumen is used for inflating a long balloon positioned in the distal portion of the esophagus to compress bleeding varices. The third lumen is used for aspiration of stomach contents.

shape memory alloy (SMA).—an alloy that permits one to potentially design an implant that can be changed to its desirable body form by a well-controlled heating process.

Sherman plate.—a type of bone-fracture fixation plate.

side-lobelgrating lobe artifact.—an artifact in which several additional sound beams may be located outside the main axis of the ultrasound beam.

Sideris patch.—a “patch” used to close an atrial septal defect.

Silastic rubber.—trade name of Dow Corning (Midland, Mich) for a condensation polymer. It is a type of soft, flexible silicone rubber.

silicone.—a generic term for organic silicon compounds polymerized for use as oils, polishes, and rubberlike materials.

Silicone rubber.—a trade name of Dow Corning (Midland, Mich) for certain rubber polymers made from polydimethyl siloxane, which is polymerized by a condensation process. The term *silicone rubber* is also used generically for a multitude of rubberlike polymers derived from organic silicon compounds.

Silk tube.—a type of feeding tube.

(Simon) Nitinol filter.—a type of vena cava filter.

simultaneous bidirectional flow artifact.—a Doppler ultrasound artifact in which there is the appearance of bidirectional simultaneous flow on both sides of the zero baseline.

sliding nail-plate device.—any type of device used to treat femoral neck and intertrochanteric fractures in which the device has a side plate and a tunnel through which a lag screw or pins can glide to compensate for impaction at the fracture site. *See also* dynamic hip screw.

SMA.—superior mesenteric artery, shape memory alloy.

Small-Carrion.—a type of semirigid penile prosthesis.

Smeloff-Cutter valve.—a type of prosthetic heart valve.

Smith-Hodges.—a type of pessary.

Smith-Peterson cup.—a type of metal cup placed on the reamed femoral head in cases of fracture or avascular necrosis.

Smith-Peterson nail.—a type of flanged nail for treating fractures of the femoral neck.

Snap-Lock.—a type of vascular access port.

SOAP.—a standardized method for recording patient progress notes: *S* = subjective patient complaint, *O* = objective findings, *A* = assessment of the program, *P* = plan of action.

soft point bullet.—bullets that have some of the lead core exposed at the tip. Soft point bullets are designed to deform into a mushroom shape in tissue to maximize tissue damage.

Somi brace.—a type of cervical spine brace.

SIP.—status post. This term is frequently seen in radiologic requisitions. It means the patient had something done in the past, either recent past or distant past; eg, “s/p hip arthroplasty” simply means the patient had hip replacement surgery sometime in the past. Unfortunately, s/p carries no time connotation and is a nonspecific, often nonuseful term.

spinal column stimulator.—an electronic device with leads implanted in the epidural space, the dura, or the subarachnoid space to provide an electrical signal for the relief of pain or muscle spasticity. These are sometimes called a TENS (transcutaneous electrical stimulation) unit. Similar devices may be used for stimulation of the vagus nerve in the neck or the sacral plexus in the pelvis.

SR.—slow-release medication, sinus rhythm, or “see report.” *SR* is often written on the front of radiographic film folders by radiologists too pressed for time to describe difficult or complex radiographic findings on a particular study.

stainless steel.—a common metallic biomaterial.

Starr-Edwards valve, SE valve.—a type of prosthetic heart valve. Its ball-cage design was one of the first successful prosthetic heart valves. It was introduced in 1960 by Albert Starr, a young thoracic surgeon, and Lowell Edwards, a highly successful engineer and inventor.

STAT, stat.—abbreviation for *statim*, which means “immediately” in Latin. It is supposed to indicate an emergency of the most extreme kind. Unfortunately, this term has been abused by physicians and others who desire a radiologic study, laboratory procedure, or patient consultation performed quickly for their own convenience or for the patient’s convenience rather than for an emergency situation. Because of this abuse, the term has little significant meaning in many radiology, pathology, and emergency departments.

Steffee device.—a type of posterior spine-fixation apparatus that uses flat plates connected to pedicular screws.

Steinman pin.—a type of pin commonly used for fixation of fracture fragments during fracture reduction and skeletal traction.

St. Jude valve, St. Jude bileaflet prosthesis.—a type of prosthetic heart valve. *See* Lillehei-Kaster valve.

Strecker stent.—a flexible balloon-expandable tantalum endovascular stent.

subdural drainage catheter.—a catheter commonly placed to diminish subdural hematoma reaccumulation and to allow the brain to reexpand.

sump drain.—a type of drainage that provides a constant low level of suction. Modern sump drains often have three lumina. One lumen allows for drainage of fluid, the second allows filtered air to be sucked into the drainage bed to provide pressure for drainage, and the third is used to irrigate the wound bed.

suprapubic cystostomy.—a catheter placed through the anterior pelvic wall directly into the bladder.

Swan-Ganz catheter.—a registered trade name of Baxter Healthcare Corporation (Deerfield, Ill). This term has come to represent any type of multilumen central venous catheter used for measuring hemodynamic pressures and cardiac output. The tip of the catheter is usually placed in a proximal pulmonary artery branch and may be temporarily wedged more distally for measurement of pulmonary venous or left atrial pressure. The first clinical use of such a catheter was described by H. J. C. Swan, Willard Ganz, and colleagues in 1970.

Swanson prosthesis.—a type of prosthesis used in small joints, such as in the fingers.

Sx.—signs, symptoms.

Synchromed.—a type of vascular access port.

syndesmotic screw.—an orthopedic screw that is placed across the distal tibiofibular joint parallel and 1–2 cm proximal to the ankle joint.

T

TAE.—transcatheter arterial embolization.

tantalum.—a noncorrosive, malleable metal found in some prosthetic devices. As a mesh, it was formerly used to reinforce wound closures.

TARA.—total articular replacement arthroplasty.

TCP/IP.—transmission control protocol/Internet protocol, a network standard commonly used to transmit data, especially on the Internet.

TCu (Copper T).—a type of intrauterine contraceptive device.

Teflon (polytetrafluoroethylene, PTFE, polytef).—The best known of the fluorocarbon polymers, a material resulting from substituting the hydrogen atoms of polyethylene with fluorine.

Tenckhoff catheter.—a peritoneal dialysis catheter.

TENS.—transcutaneous electrical neural stimulation. *See also* spinal column stimulator.

tension band wiring.—a type of orthopedic wiring used to absorb tension and apply compression to bony fragments at a fracture site.

TFE.—tetrafluoroethylene, the chemical compound used to manufacture Gore-Tex, Teflon, and other fluorocarbon polymers.

THA.—total hip arthroplasty.

THJR.—total hip joint replacement.

thoracostomy tube.—another term for a chest tube. It is used to drain pleural fluid collections or reexpand the lung in cases of a pneumothorax.

Thoratec.—a type of ventricular assist device.

Thorotrast.—thorium dioxide, formerly used as a radiologic contrast agent. It was discontinued because of its carcinogenic properties. Thorium is a radioactive element and emits alpha particles.

THR.—total hip replacement.

through-transmission artifact.—an ultrasound artifact created when tissue that lies deep to fluid-filled structures appears more echogenic than normal.

TIPS(S).—transjugular intrahepatic portosystemic shunt or stent.

tissue compatibility.—a general descriptive term describing the compatibility of a prosthesis or device for use in human tissues.

titanium.—metallic element used as an implant material because of its high corrosion resistance and relatively low density.

titanium interbody spacer (TIS).—*See* vertebral cage.

TKA.—total knee arthroplasty.

TKR.—total knee replacement.

TLD.—thermoluminescent dosimeter; a device used to measure ionizing radiation.

TNTC.—too numerous to count.

TPN.—total parenteral nutrition.

tracheostomy tube.—a tube directly inserted into the trachea through the anterior tracheal cartilage. It bypasses the larynx and pharynx and is inserted for patients in need of long-term mechanical ventilation.

TRAM flap.—abbreviation for transverse rectus abdominis muscle flap, a surgical procedure in which a portion of the abdominal wall is used to cosmetically construct a breast after mastectomy.

triflanged nail.—a type of fixation nail used for intracapsular hip fractures.

TSR.—total shoulder replacement.

T-tube drain.—a type of traditional gravity drain configured in a T shape. T-tubes are most often used for common bile duct drainage.

tubular plate.—a fracture fixation plate with a circular profile. For example, a one-third tubular plate represents one-third of a cylindrical circumference. Tubular plates are thin, self-compressing, and easily bent to adapt to varying fracture conditions.

twiddler's syndrome.—a situation in which a patient “twiddles” with his or her pacemaker pack, twisting it around in its pocket. Such an action can lead to fractured wires, pacemaker malfunction, or retraction of the pacemaker leads.

Tx.—treatment, therapy, transplant.

U

UAC.—umbilical artery catheter.

UHMWPE.—ultrahigh molecular weight polyethylene, a type of polyethylene popular for use as the bearing interface in total joint arthroplasty.

umbilical catheter.—a type of central venous catheter used in neonates. The catheter is inserted either into the umbilical vein or into one of the umbilical arteries.

Unicompartmental (knee prosthesis, replacement).—a type of knee prosthesis that is limited to either the medial or lateral knee compartment.

Uni-Flate 1000.—a type of penile prosthesis.

unipolar (prosthesis).—a type of hip prosthesis in which the implant is a single metallic unit with the prosthetic head sized appropriately to press fit into the patient's acetabulum.

universal rod.—a type of spinal rod used with the modular spine fixation system.

ureteral stent.—a urinary stent placed in the ureter.

urinary stent.—a generic term used for any stent employed in the urinary system to traverse benign and malignant strictures, bypass areas of dehiscence or obstructing calculi, and help with fistula healing.

Urolume stent.—a metallic stent used for the treatment of urethral strictures. The stent is woven in the form of a tubular mesh composed of a superalloy (a high-temperature, high-stress alloy).

UVC.—umbilical vein catheter.

V

V & P.—vagotomy and pyloroplasty.

VAD.—*See* ventricular assist device. (Also sometimes known as LVAD [left ventricular assist device].)

van Sonnenberg catheter.—a sump drainage catheter system developed for the percutaneous treatment of abscesses.

Vasport.—a type of vascular access port.

Vena Tech filter.—a type of inferior vena cava filter used to prevent clot propagation to the lungs.

ventricular assist device (VAD).—a device used to assist the heart in its blood pumping function. VADs may be univentricular or biventricular. For example, the Novacor left ventricular assist device is an implantable electrically driven pump that takes blood through a Dacron conduit from the apex of the left ventricle and pumps it through another Dacron conduit to the aorta.

ventriculoperitoneal shunt.—a shunt system designed to reduce intracranial pressure and prevent the development of hydrocephalus. Cerebrospinal fluid is shunted from the ventricular system of the brain to the peritoneal cavity.

vertebral cage.—a device used to replace or support a vertebral body destroyed by tumor, infection, or trauma. These are also known as a titanium interbody spacer (TIS), because they are often made from titanium. A typical vertebral cage has a hollow, threaded cylindrical structure filled with bone graft, and it is fixed to vertebral end plates superiorly and inferiorly by teeth. There are many different designs, some of which are the Bagby and Kuslich (BAK) Cage, the Ray Threaded Fusion Cage (Ray-TFC), the Harms Cage, and the Brantigan Cage.

vertebroplasty.—percutaneous injection of methylmethacrylate or similar material into a vertebral body to provide pain relief from a vertebral lesion, such as a pathologic fracture of the vertebra or the collapse of the vertebra due to trauma or osteoporosis.

v.i.—*vide infra*; Latin for “see below.”

Vitalium.—a registered trademark of Howmedica Osteonics (Allendale, NJ) for a cobalt-chromium alloy used in a variety of prostheses and medical instruments.

viz.—*videlicet*; Latin for “namely.”

VP shunt.—ventriculoperitoneal shunt.

v.s.—*vide supra*; Latin for “see above.”

W

Wallstent.—a type of self-expanding metallic stent. It is composed of a wire mesh and is used to bypass biliary and vascular obstructions.

wax plombage (oleo plombage).—a treatment for tuberculosis in which wax was placed in the thoracic cavity to collapse and replace the affected lung.

WHO.—World Health Organization.

Wiltse system.—an orthopedic spine-fixation system in which pedicle screws are connected to a rod by clamps.

WNL.—within normal limits.

w/o.—without.

wraparound (fold-in, foldover) artifact.—a type of magnetic resonance imaging artifact in which a portion of the image is folded over onto some other portion of the image.

wrt.—with respect to.

WYSIWYG.—what you see is what you get.

X

xenograft.—same as a heterograft.

XIP.—perform x-ray study in plaster.

XOP.—perform x-ray study out of plaster.

Y

YAG (laser).—yttrium aluminum garnet (laser).

Yale brace.—a type of cervical spine brace.

Yasargil clip.—a type of clip for occluding a cerebral aneurysm.

yaw.—the angle between the long axis of a bullet and its path of flight.

Z

Zickle device.—a system designed for the stabilization of pathologic femur fractures and subtrochanteric hip fractures. It consists of an intramedullary rod and triflanged femoral neck nail combination.

Zielke rod.—a type of spine-fixation device in which a unilateral plate is affixed to the lateral portion of adjacent vertebral bodies by screws.

Zielke system.—See Dwyer-Zielke system.

zipper artifact.—a type of computed radiographic artifact caused by missing information being reflected in the image as a lucent vertical band. Also refers to a type of magnetic resonance imaging artifact consisting of a prominent black-and-white stripe often in the center of the frequency-encoding or phase-encoding axis.

Z-stent.—a generic term for a variety of metallic stents used to overcome areas of narrowing in such tubular structures as vessels, bile ducts, ureters, and the urethra.

References

Allison D, Strickland N. Acronyms and synonyms in medical imaging. Oxford, England: Isis Medical Media, 1996.

Brown M, Hammond P, Johnson T. Dictionary of medical equipment. London: Chapman and Hal, 1986.

Churchill's illustrated medical dictionary. New York, NY: Churchill Livingstone, 1989.

De Sola R. Abbreviations dictionary. 8th ed. Boca Raton, Fla: CRC, 1992.

Dorland's illustrated medical dictionary. 26th ed. Philadelphia, Pa: Saunders, 1981.

Duncan HA. Duncan's dictionary for nurses. 2nd ed. New York, NY: Springer, 1989.

Gelman MI. Radiology of orthopedic procedures, problems and complications. Philadelphia, Pa: Saunders, 1984.

Haber K. Common abbreviations in clinical medicine. New York, NY: Raven, 1988.

Hamilton B, Guidos B. Medical acronyms, symbols, and abbreviations. 2nd ed. New York, NY: Neal-Schumann, 1988.

Hoppenfeld S, Zeide MS. Orthopaedic dictionary. Philadelphia, Pa: Lippincott-Raven, 1994.

Hunter TB, Taljanovic MS. Overview of medical devices. *Curr Probl Diagn Radiol* 2001; 30:94-139.

Indovina T, Lindh WQ. The radiology word book. Philadelphia, Pa: Davis, 1990.

Jablonski S. Dictionary of medical acronyms and abbreviations. Philadelphia, Pa: Hanley and Belfus, 1987.

Kilcoyne RF, Farrar EL. Handbook of orthopedic terminology. Boca Raton, Fla: CRC, 1991.

Logan CM, Rice MK. Logan's medical and scientific abbreviations. Philadelphia, Pa: Lippincott, 1987.

Medical device register 1992. The official directory of medical suppliers. Vols 1, 2. Montvale, NJ: Medical Economics, 1992.

Mosby's medical, nursing, and allied health dictionary, 3rd ed. St Louis, Mo: Mosby-Year Book, 1990.

Mossman J, ed. Acronyms, initialisms, and abbreviations dictionary. 16th ed. Detroit, Mich: Gale Research, 1992.

Schmidt JE. Medical discoveries: who and when. Springfield, Ill: Charles C. Thomas, 1959.

Schultz RJ. The language of fractures. 2nd ed. Baltimore, Md: Williams & Wilkins, 1990.

Segen JC, ed. The dictionary of modern medicine. Park Ridge, NJ: Parthenon, 1992.

Stedman's medical dictionary. 25th ed. Baltimore, Md: Williams and Wilkins, 1990.

Thomas CL, ed. Taber's cyclopedic medical dictionary. Philadelphia, Pa: Davis, 1989.

Webster JG, ed. Encyclopedia of medical devices and instrumentation. Vols 1-4. New York, NY: Wiley, 1988.