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Titolo	Nuclear Medicine Textbook : Methodology and Clinical Applications / / edited by Duccio Volterrani, Paola Anna Erba, Ignasi Carrió, H. William Strauss, Giuliano Mariani
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ISBN	3-319-95564-0
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XVI, 1331 p. 676 illus., 401 illus. in color.)
Disciplina	616.07575
Soggetti	Nuclear medicine Radiology Oncology Nuclear Medicine Diagnostic Radiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Fundamentals of natural and artificial radioactivity -- Ionizing radiations and their interaction with matter -- General design of radiopharmaceuticals -- Pathophysiology of organs/diseases as it relates to radiopharmaceuticals' uptake -- Single-photon emitting radiopharmaceuticals -- Positron-emitting radiopharmaceuticals Radiopharmaceuticals for therapy -- Radiopharmacy/radiochemistry for single-photon emitting and for therapeutic radiopharmaceuticals -- Radiopharmacy/radiochemistry for positron-emitting radiopharmaceuticals -- Methods and instrumentation for measuring radioactivity -- General-purpose and dedicated gamma cameras -- Image acquisition and processing with gamma cameras (including SPECT/CT and dedicated gamma cameras) -- Quality control of gamma cameras -- Principles of PET imaging -- Principles of CT imaging -- Principles of MR imaging -- PET/CT and PET/MR tomographs -- Image acquisition and processing with PET/CT and PET/M -- Quality control of PET/CT and PET/MR tomographs -- Essentials of CT image interpretation -- Essentials of MR image interpretation -- General principles of radionuclide therapy in oncology -- Radiation protection

	for patients, personnel, and the environment -- Principles of radiation biology and dosimetry for nuclear medicine procedures -- Hybrid imaging and radionuclide therapy of skeletal diseases -- Hybrid imaging of the cardiovascular system -- Hybrid imaging of pleuro-pulmonary diseases -- Hybrid imaging of the Central Nervous System -- Hybrid imaging of infection/inflammation -- Hybrid imaging of the gastrointestinal tract -- Hybrid imaging and radionuclide therapy of the liver and biliary tract -- Hybrid imaging and radionuclide therapy in endocrinology -- Hybrid imaging and radionuclide therapy of neuroendocrine tumors -- Hybrid imaging of the lymphatic system -- Radioguided surgery. .
Sommario/riassunto	Building on the traditional concept of nuclear medicine, this textbook presents cutting-edge concepts of hybrid imaging and discusses the close interactions between nuclear medicine and other clinical specialties, in order to achieve the best possible outcomes for patients. Today the diagnostic applications of nuclear medicine are no longer stand-alone procedures, separate from other diagnostic imaging modalities. This is especially true for hybrid imaging guided interventional radiology or surgical procedures. Accordingly, today’s nuclear medicine specialists are actually specialists in multimodality imaging (in addition to their expertise in the diagnostic and therapeutic uses of radionuclides). This new role requires a new core curriculum for training nuclear medicine specialists. This textbook is designed to meet these new educational needs, and to prepare nuclear physicians and technologists for careers in this exciting specialty.