


**EMBRACING CHANGE. IMPACTING PATIENT CARE.**

**KEYWORDS**

3D  
3D printing  
4D computed tomography (4DCT)  
absolute dosimetry  
acceptance testing  
accreditation body  
accurate self-assessment  
achievement  
activation  
adaptability  
adaptive radiotherapy  
adaptive sampling  
aliasing  
alpha-particles  
alternative payment model (APM)  
ambulatory payment  
classification (APC)  
ambulatory surgical center (ASC)  
american association of physicists in medicine (AAPM)  
american board of medical physics (ABMP)  
american board of radiology (ABR)  
american college of radiation oncology (ACRO)  
american college of radiology (ACR)  
american medical association (AMA)  
american society for radiation oncology (ASTRO)  
amorphous selenium  
amorphous silicon  
anatomical models  
angiography  
angioplasty  
anisotropy  
anthropomorphic  
applicator  
arterial input function  
arteriovenous malformation (AVM)  
artificial intelligence (AI)  
asymmetric fields  
atherosclerosis  
Auger electrons  
augmented reality  
autocorrelation function  
B-mode  
backprojection  
backscatter  
Bayesian statistics  
beam hardening  
beam shaping  
beta particles  
billing code  
bioeffect dose  
bioelectromagnetics  
biological dosimetry  
bipartition models  
blood flow  
blood vessels  
bolus  
bone dosimetry  
bone mineral density (BMD)  
bone structure  
bone-marrow transplantation  
boron neutron capture theory (BNCT)  
boronophenylalanine (BPA)  
brachytherapy  
brain  
breast  
calcifications  
calibration  
canadian organization of medical physicists (COMP)  
capture gamma rays  
carrier advisory committee (CAC)  
carrier medical director (CMD)  
cavity theory  
cell kinetics  
centers for medicare and medicaid services (CMS)  
cerebral vasculature  
chamfer matching  
change catalyst  
charge coding  
chemical dosimetry  
chest radiography  
classifier design  
clinical privilege  
clinical trials  
Co-60  
code of ethics  
coherent scatter  
coincidence counting  
collapsed cone  
superposition  
collection efficiency  
collimation  
color flow imaging

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commissioning  
communication skills  
community outreach  
compensators  
competency  
Compton effect  
computed radiography  
computed tomography  
simulation  
computer aided diagnosis  
(CAD)  
computer animation  
computer software  
computer vision  
cone beam computed  
tomography (CBCT)  
cone-beam CT  
conference of radiation  
control program directors  
(CRCPD)  
conflict management  
conformal radiotherapy  
continuing medical  
education  
contour extraction  
contralateral subtraction  
contrast  
contrast agent  
conversion factor  
convolution  
convolution/superposition  
cost function  
course design  
COVID-19 Pandemic  
credentialing  
cross sections  
cross validation  
crosstalk  
Cs-137  
CT  
CT colonography  
current procedural  
terminology (CPT)  
curricula  
cyclotrons  
data acquisition  
data interpolation  
deadtime  
decision theory  
deconvolution  
deep learning (DL)  
deformation  
delegation skills  
demonstrations  
densitometry  
density scaling  
dental radiography  
detectability index  
detective quantum  
efficiency (DQE)  
developing others  
diagnostic radiology  
diagnostic-related groups  
(DRG)  
dialysis  
DICOM  
DICOM-RT  
diffusion  
digital breast tomosynthesis  
(DBT)  
digital imaging  
digital subtraction  
angiography (DSA)  
digitally reconstructed  
radiograph (DRR)  
diodes  
diodes  
distal edge tracking  
distortion  
distributed computing  
Doppler ultrasound  
dose  
dose point kernel  
dose response  
dose uniformity  
dose volume histograms  
dose-surface histogram  
dosimetry  
dosimetry protocols  
dual-energy imaging  
dual-energy x-ray  
absorptiometry (DXA)  
dynamic multileaf  
collimator (DMLC)  
dynamic wedge  
echo planar imaging  
edge detection  
edge spread function  
education  
effective dose  
EGS4  
elastic matching  
electrocardiograms  
electron contamination  
electron optics  
electron therapy  
electronic disequilibrium  
electronic portal imaging  
EM reconstruction  
emotional self-awareness  
emotional self-control  
empathy  
energy dependence  
energy fluence  
energy imparted  
energy spectrum  
enhanced dynamic wedge  
epithermal neutrons  
equivalent fields  
estimation theory  
ethical behavior  
evaluation and  
management (E/M)

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expectation maximization (EM)	gamma cameras	human resources
exposure optimization	Gamma Knife	hyperthermia
exposure reduction	gating	hypoxia
external affairs	Gd-DTPA	I-125
extra-focal radiation	Geant4	image analysis
extracellular contrast agents	gel dosimeter	image artifacts
extrapolation chamber	generalized cross-validation	image compression
eye plaques	generators	image correlation
failure modes and effects analysis	genetic algorithm	image fusion
fast Fourier transformation	geometric distortion	image guidance
fast neutrons	geometric transformation	image intensifier
fat suppression	geometry factor	image processing
fault tree	global component	image reconstruction
feature extraction	glomerular filtration rate	image storage
feature selection	glomerular filtration rate (GFR)	image visualization
fee for service (FFS)	grids	image-guided surgery
Fermi-Eyges theory	group theory	image-guided therapy
fetal dose	hand radiography	imaging theory
field shaping	harmonic imaging	immobilization
film	head and neck	in vivo dosimetry
filtration	head scatter	incident learning
finance	health insurance portability and accountability act (HIPAA)	influence
finite element analysis	health physics	information resources
FLASH	healthcare common procedural coding system (HCPCS)	inhomogeneity corrections initiative
flat-panel imagers	heart	inspirational leadership
flattening filters	heat transfer	intensifying screens
flood-field uniformity	heavy ions	intensity modulation
flow imaging	helical CT	interface dosimetry
flow velocity	high dose rate (HDR)	internal conversion electrons
fluorescence	high-field NMR	internal dosimetry
fluorodeoxyglucose (FDG)	high-resolution imaging	internal radionuclide therapy
fluoroscopy	hospital outpatient prospective payment system (HOPPS)	internal wedge
food and drug administration (FDA)	hot atoms	international classification of disease (ICD)
fractal analysis	Hough spectrum	interstitial brachytherapy
freestanding cancer center		interstitial hyperthermia
functional imaging		interventional MRI
fuzzy logic		intracavitary brachytherapy

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intracavitary hyperthermia  
intraoperative radiation  
therapy (IORT)  
intravascular brachytherapy  
inverse planning  
ion recombination  
ionization chamber  
ionizing radiation  
Ir-192  
irregular fields  
joint space width  
K x-ray fluorescence (KXRF)  
k-space  
key performance indicator  
lacunarity  
lasers  
lesion detectability  
liability insurance  
licensed medical physicist  
LiF  
light propagation  
light scattering  
line spread function  
linear accelerator  
linear attenuation  
coefficients  
linear classifier  
linear discriminant analysis  
linear energy transfer (LET)  
linear quadratic model  
linear regression analysis  
liquid ionization chamber  
local coverage  
determinations (LCD)  
localization  
lossy compression  
low contrast detectability  
low dose rate (LDR)  
low energy X-rays  
low-dose CT  
low-field MRI

lung  
lung perfusion  
lutetium oxyorthosilicate  
(LSO)  
machine learning (ML)  
macular degeneration  
magnetic fields  
mammographic screening  
mammography  
Markov random fields  
maximum likelihood  
estimation (MLE)  
MCNP  
mechanical properties  
medical internal radiation  
dose (MIRD)  
Medical Physicists  
medical physics assistant  
(MPA)  
medical physics extender  
medical physics licensure  
medical physics practice  
guidelines (MPPG)  
medically necessary  
medically unlikely edits  
(MUE)  
medicare  
medicare access and CHIP  
authorization act (MACRA)  
medicare administrative  
contractor (MAC)  
medicare physician fee  
schedule (MPFS)  
megavoltage imaging  
membrane permeability  
merit-based incentive  
payment system (MIPS)  
metal/ $\alpha$ -Se detector  
microcalcifications  
microdosimetry  
microfocus x-ray

microlens arrays  
microprocessors  
microtrons  
microwaves  
mini MLC  
minimum perceptible  
contrast  
minimum practice standard  
minimum staffing level  
mixed integer programming  
modeling  
modifier  
modulation transfer function  
(MTF)  
monitor chambers  
monitor unit calculations  
monoclonal antibody  
therapy  
Monte Carlo  
morphology  
MOSFET detector  
motion artifacts  
MR  
MR elastography  
MR linac  
MR microscopy  
MR spectroscopy  
MRI  
multileaf collimator (MLC)  
multiple scattering  
multiple-echo sequence  
mutual information  
myocardial perfusion  
nanoparticles  
national correct coding  
initiative (NCCI)  
national council on  
radiation protection (NCRP)  
national coverage  
determination (NCD)  
near infrared

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neutron capture therapy  
new ventures leadership  
noise  
noise power spectrum  
noise reduction  
nonionizing radiation  
nonlinear dynamics  
nonlinear image warping  
normal tissue complication  
probability (NTCP)  
nuclear data  
nuclear interactions  
nuclear medicine  
nuclear regulatory  
commission (NRC)  
numerical analysis  
obliquity effect  
observer performance  
operations  
operations research  
ophthalmic applicators  
optical diffusion theory  
optical dosimetry  
optical imaging  
optical modeling  
optical tomography  
optical transillumination  
optically stimulated  
luminescence dosimetry  
(OSLD)  
optimism  
optimization  
organ dose  
organ motion  
organizational awareness  
osteoarthritis  
osteoporosis  
other  
outreach  
PACS  
pair production

panoramic radiography  
parallel computing  
parametric imaging  
patient movement  
patient positioning  
patient safety  
pattern recognition  
Pd-103  
pencil beam algorithms  
Penelope  
penumbra  
performance tests  
perfusion imaging  
permanent implants  
personnel monitoring  
perturbation factor  
PET  
phantoms  
pharmacokinetic modeling  
Phase contrast  
phase space  
phased arrays  
photoacoustics  
photoactivation  
photodynamic therapy  
(PDT)  
photogrammetry  
photon counting  
photon counting detector  
photon detectors  
photoneutrons  
photostimulable phosphor  
PIN photodiodes  
place of service (POS)  
planar imaging  
point extraction  
point-based registration  
point-spread kernels  
polarity effects  
polarized light  
polymer gels

portal imaging  
positron emission  
mammography  
practice accreditation  
practice expense  
practice parameter  
practice peer review  
practice standards  
preventative maintenance  
problem-solving skills  
process map  
process of care  
professional component  
professional episode  
professional ethics  
professional liability  
professional practice  
evaluation  
professional vitality  
prostate  
prostate therapy  
prosthetics  
proton NMR  
protons  
proximity function  
psychophysical analysis  
pterygium  
public education  
public health emergency  
(PHE)  
public information  
pulmonary embolism  
pulmonary nodules  
pulse sequences  
pulsed brachytherapy  
qualified medical physicist  
(QMP)  
quality assurance  
quality control  
quality management

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quality management program	relative value unit (RVU)	SNVM
quality payment program (QPP)	relaxation times	software
quantitative imaging	resolution	source strength
radial dose function	respect for diversity, inclusion, and equity	spatial filtering
radiation detectors	respiration	spatial resolution
radiation dosimetry	responsible behavior	SPECT
radiation effects	restenosis	spectrometry
radiation oncology incident learning system	rheumatoid arthritis	spectroscopic imaging
radiation oncology practice accreditation (ROPA)	risk	specular microscopy
radiation protection	risk management	spiral CT
radiation risk	risk priority number	splines
radiation safety	ROC analysis	standard operating procedures
radiation therapy	ROI fluoroscopy	statistical analysis
radiation transport	rotational therapy	STEM education
radiobiology	rotational tomography	stents
radiochromic film	scatter	stereolithography
radioembolization	scattering theory	stereology
radioepidemiology	scintillation cameras	stereomammography
radiography	scintillators	stereotactic body radiation therapy (SBRT)
radioimmunotherapy	scintimammography	stereotactic breast biopsy (SBB)
radiolabeled microspheres	scope of practice	stereotactic radiosurgery
radiolabeled nanoparticles	screen unsharpness	stochastic processes
radiomics	sectoring	Stopping power
radionuclide production	seed localization	storage phosphors
radiosensitivity	segmentation	strategic planning
radiosurgery	self-confidence	stroke
reciprocity failure	semiconductor detectors	structure analysis
record and verify	sensitometry	supervision
recovery audit (RA)	service orientation	surface dose
registration	setup errors	surface matching
regulatory	setup verification	Swank factor
reimbursement	shape analysis	synchrotron radiation
relative biological effectiveness (RBE)	shape deformation	systematic errors
relative value scale (RVS)	shielding	target localization
relative value scale update committee (RUC)	signal processing	targeted radiotherapy
	silicon photomultipliers	Tc-99m
	simulation	teaching
	skeletal radiography	
	small fields	
	SNR	

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teamwork and  
collaboration  
technical component  
technical episode  
technical reimbursement  
technical standard  
telehealth  
telerradiology  
templates  
temporal resolution  
temporal subtraction  
test objects  
texture analysis  
the joint commission (TJC)  
thermal ablation  
thermal dosimetry  
thermal neutrons  
thermoacoustics  
thermoluminescent  
dosimeter (TLD)  
thermometry  
thin film transistors  
third party payers  
thresholding  
TIFF  
tissue characterization  
tissue composition  
tissue density  
tissue equivalency  
tolerance doses  
tomography  
tomosynthesis  
tomotherapy  
total body irradiation (TBI)  
total effective dose  
equivalent (TEDE)  
total skin electron therapy  
(TSET)  
total skin irradiation  
trabecular bone  
transducers  
transfer function  
transformation  
transit dosimetry  
transmission measurements  
transparency  
transport equation  
treatment planning  
treatment techniques  
treatment verification  
tube loading  
tumor control  
tumor vasculature  
turbid media  
turbulence  
ultrasonics  
unsealed radionuclide  
validation  
value and advocacy  
vascular brachytherapy  
vascular imaging  
veiling glare  
ventilation/perfusion  
vessel tracking  
videodensitometry  
virtual wedge  
visual perception  
volume effects  
voxel dose calculation  
warping  
wavelets  
wedges  
Wiener spectrum  
Work from Home  
workforce assessment  
x-ray production  
x-rays