

INDEX

A

- ActiveAx 360
- Active targeting 236, 237, 245, 249, 410, 447
- Adiabatic full passage (AFP) 182, 337
- Adipose tissue imaging
- abdominal fat 260, 267
 - Dixon imaging 262, 264
 - fat-water imaging 264
 - in-phase 263, 264
 - intra-abdominal fat (IAT) 267
 - out-of-phase 263, 264
 - subcutaneous fat (SAT) 262, 264, 265, 267
 - visceral adipose tissue (VAT) 262, 267
- Alzheimer's disease 36
- Analysis of functional neuroimages (AFNI) 122
- Anesthesia
- alfaxalone 429
 - barbiturate 429
 - bupivacaine 126
 - chloralhydrate 430
 - chloralose 430
 - fentanyl/fluanisone 429
 - halothane 221
 - isoflurane 47, 48, 60, 66, 68, 95, 108, 109, 132, 139, 140, 144, 156, 176, 178, 184, 192, 210, 212, 238, 241, 251–253, 260, 287, 302, 319, 321, 333, 335, 336, 350, 352, 353, 383, 411, 412, 434
 - ketamine 65, 221, 261, 301, 302, 333, 335, 429
 - propofol 301, 302, 429
 - sevoflurane 434
 - tribromoethanol 430
 - urethane 123
- Angiography 378, 386, 388
- Animal monitoring 46, 47, 61, 91, 95, 108, 109, 138, 140, 156, 157, 192, 209, 239, 271, 273, 274, 287, 319, 333, 350, 398–400, 411, 412
- Anisotropy 90, 92, 106, 107, 114, 292, 354
- Apparent diffusion coefficient (ADC) 3, 4, 90, 92, 95, 96, 104–106, 110, 112, 114, 136, 292, 354, 379, 381–383, 388
- Arterial input function (AIF) 44, 54, 396
- Arterial spin labeling (ASL)
- ASLtbx 63
 - continuous arterial spin labeling (CASL) 60, 63, 65, 67, 68
 - labeling efficiency 60, 65, 67, 68
 - labeling plane 60, 65
 - pseudo continuous arterial spin labeling (pCASL) 60
 - pulsed arterial spin labeling (PASL) 60
 - transit time 67, 68
- Atlas 361–363
- AxCaliber 360
- Axial diffusivity 106, 112
- ## B
- B_0
- B_0 inhomogeneities 32
 - B_0 map 158, 163, 192, 195
 - field inhomogeneities 27, 32
 - fieldmap 366
- B_1 homogeneity 108, 156
- Bloch equations 16
- Blood–brain barrier (BBB) 24, 42, 52, 352, 355, 380, 395, 396, 404–406
- Blood flow 42, 45, 59–69, 118, 145, 221, 270, 302, 305, 309, 378, 379, 384, 385, 387, 424, 434
- Blood oxygenation level dependent (BOLD) 34, 42, 118–121, 123–125, 131, 206, 221, 299, 300, 302, 303, 306, 308, 424
- Bolus
- arrival time 85
 - tracking 42–45, 55
- Brownian
- diffusion 89
 - motion 103, 135
- B-value 96, 100, 104, 110, 113, 114, 137, 140, 145, 146, 290, 354, 368
- ## C
- ^{13}C
- ^{13}C enriched substrates 152
 - ^{13}C glucose 170, 175, 177, 182, 184
- Cancer 6, 104, 107, 155, 156, 189, 259, 297, 316, 331–343, 442
- Cardiac MRI
- cine 273, 275–279

Cardiac MRI (*cont.*)

- CMR42 272, 280
- ejection fraction (EF) 279
- end-diastolic volume (EDV) 279
- endo-cardiac border 279, 280
- end-systolic volume (ESV) 279
- epi-cardiac border 279, 280
- intragate (Ig) 271
- long axes (LAX) 271, 273, 275, 276, 278, 279
- short axes (SAX) 273, 275–278, 280

Cardiovascular diseases (CVD) 269

Cardiovascular system 431, 433, 434

Carotid artery 384

Carr Purcell Meiboom Gill (CMPG) 26, 28, 337

Central nervous system (CNS) 35, 347, 356, 359, 360, 364, 365, 395, 396

Cerebral perfusion

- cerebral blood flow (CBF) 43, 45, 55
- cerebral blood volume (CBV) 43, 55
- mean transit time (MTT) 43, 45, 55

Cerebrospinal fluid (CSF) 23, 24, 30, 31, 54, 92, 200, 299, 356, 360, 380, 389, 390

Chelate 24, 25, 47, 55, 444, 445, 447

Chemical exchange saturation transfer (CEST) 3, 25, 378, 446

Chemical shift 7, 8, 114, 151, 158, 159, 163, 171, 189, 237, 242, 243, 246, 247, 255, 260, 264, 337, 378, 446, 452

Chemical shift displacement error (CSDE) 158, 159, 163, 171

Choline (Cho) 160, 331, 332

Complexone 47

Connectivity 117, 131, 349, 361

Contrast agent (CA) 321

- diethylenetriaminepentaacetic acid (DTPA) 24, 47, 350, 357, 367, 445
- DOTA 24, 445, 448
- dysprosium (Dy) 42, 47
- gadolinium (Gd) 24, 47, 350, 357, 367, 445, 447, 448

Coupling 66, 118, 120, 123, 151, 155, 170, 175, 182

Creatine (Cr) 155, 160, 162, 190, 191, 332

Cryoprobe 209, 214, 271, 348, 366, 397

D

- Decoupling 171–174, 182
- Demyelination 349, 356, 359
- Deoxyhemoglobin 34, 35, 299, 305, 322, 387
- Dexmedetomidine 123
- Diffusion v, 3, 4, 41, 45, 135–146, 154, 264, 286, 289–292, 294, 298, 299, 348, 349, 353, 354, 358–361, 364, 366, 368, 379, 383, 386, 388
- coefficient 3, 90, 92, 104–106, 136, 137, 141, 143, 144, 253, 354, 379, 383
- gradient 91, 354, 360, 361, 368, 379, 386
- time 91, 103

Diffusion tensor imaging (DTI) 379, 388

- DtiStudio 108, 111

Diffusion weighted imaging (DWI) 90, 136, 348, 349, 379

Diffusivity 105, 106, 112

Directional-encoded-color (DEC) maps 107, 294

Dynamic contrast enhanced (DCE) 301, 387, 396

- Tofts model 73, 81–83
- two-compartment exchange model (2CXM) 73, 81, 83

Dynamic susceptibility contrast (DSC) 42, 59

Dynamic T2 412–415

E

- Echo planar imaging (EPI) 43, 63, 96, 110, 122, 301, 353
- Echo time (TE) 22, 63, 91, 130, 153, 158, 181, 261, 271, 290, 301, 337, 354, 398, 412, 413
- Eddy-currents correction (ECC) 160
- Edema 4, 23, 24, 31, 35, 269, 349, 356, 359, 379–381, 383, 385, 388
- Eigenvalues 105, 369
- Eigenvectors 107, 110, 292
- Electric-stimulation 117
- Electrocardiogram (ECG) 108, 109, 114, 239, 281, 364, 427, 433, 437
- Electrodes 108, 109, 120–128, 131–133, 239, 298, 434
- Embryo 285, 288, 293, 294, 350, 357
- Encoding 9–13, 19, 22, 27, 28, 31, 34, 44, 112, 114, 136, 141, 145, 255, 292, 309, 353, 354, 357, 358, 361, 368
- EPI ghost 141
- Ernst angle 34, 227
- Estimated glucose disposal rate (eGDR) 183, 184
- Ex vivo* imaging 348

F

- ¹⁹F 235–257, 298–300, 304, 308, 309
- FA (fractional anisotropy) 106, 107, 110, 112, 114, 285, 292, 294, 354, 355, 358–360, 363, 364, 369
- Fast diffusion coefficient (D_{fast}) 137, 143
- Fast diffusion phase (FDP) 137, 138, 141, 144
- Fast low angle shot (FLASH) 33, 34, 94, 139, 162, 207, 216, 219, 241, 271, 273, 281, 282, 323, 383, 386, 389, 398, 399, 412, 414
- Fastmap 51, 96, 113, 141, 163

- Fast spin echo (FSE) 30, 31, 35, 356, 389
 Fe(iron)..... 8, 25, 34, 35, 42, 47, 205,
 221, 237, 315–317, 325, 349, 356, 411, 447
 Ferritin 206
 Fibre orientation distribution(FOD) 358, 369
 Fibre tracking 365
 Field of excitation (FOE) 290, 291
 Field of view (FOV) 11, 13, 22, 51, 62–65,
 110, 113, 130, 133, 157, 190, 192, 194, 197,
 215, 222, 225, 227, 242, 243, 250, 255,
 261–263, 271, 273, 290, 301, 322–325, 336,
 337, 353, 355–359, 365, 383, 386, 387, 398,
 399, 401, 412, 413
 Flip angle (FA) 7, 10, 22, 23, 32–34, 63,
 130, 172, 243, 261, 271, 288, 301, 323, 324,
 336, 337, 339, 355, 357, 399
 Fluid-attenuated inversion recovery (FLAIR) . 30, 31, 35,
 380, 389, 390
 Fluorine (¹⁹F) MRI 242, 244, 252
 Fomblin 222, 350, 351, 357, 367
 Fourier-transform (FT) 7–9, 51, 99, 145,
 151, 158, 290, 291, 338, 354, 358
 Fractional anisotropy (FA) 106, 107, 112, 174,
 262, 263, 273, 292, 354, 355, 359, 360, 363,
 364, 369
 Fractional enrichment (FR) 172, 176
 Free induction decay (FID) 7, 8, 11, 13,
 158, 164, 196, 198, 366
 Frequency encoding 10–13, 19, 22, 27, 44, 255
 FSL software 122
 Full-width at half maximum (FWHM) 163, 194
 Functional diffusion MRI (fDMRI) 142, 143
 Functional diffusion weighted imaging (fdWI) 140,
 142, 145, 146
 Functional MRI (fMRI) 117–133, 205,
 222, 299, 348, 380, 433, 434
- G**
- Gamma-variate function 43
 Ghost artifacts 110, 114
 Glucose 118, 146, 162, 170,
 175–177, 182–184, 259, 331, 395, 431, 445
 Glutamate (Glu) 155, 160, 162, 181, 378, 380
 Glutamine (Gln) 155, 160, 162, 175, 181,
 190, 254, 331
 Glycerophosphocholine (GPC) 155, 160, 162,
 331, 332, 340
 Glycerophosphoethanolamine (GPE) 332, 340
 Glycolysis 175, 445
 Gradient echo (GE) 13–15, 18, 23, 25,
 32–36, 43, 44, 50, 51, 63, 122, 132, 162, 207,
 242, 252, 261, 288, 292, 294, 300, 306, 308,
 322, 355, 357, 358, 367, 389, 399, 412, 414
 Gradient echo with flow compensation (GEFC) 33,
 322, 323
- Gradient recalled echo (GRE) 206, 228,
 389, 399, 401, 403, 404, 406
 GRASE 26, 290, 292, 294, 295, 348
 Gray matter (GM) 29, 35, 68, 92, 294,
 348, 359, 360
 Gyromagnetic ratio 6, 10, 32, 91,
 151, 152, 169–172, 264, 308
- H**
- ¹H 6, 10, 16, 47, 62, 95, 121,
 140, 151, 153, 155, 158, 160, 169–175, 179,
 180, 182, 189, 207, 209, 210, 220, 222, 235,
 237, 240–243, 245–250, 252, 255, 299, 300,
 304, 308, 331, 332, 336–339, 446
 Hemoglobin 34, 299, 305
 Hexafluorobenzene (HFB) 299, 300, 305, 307, 309
 High angular resolution diffusion imaging
 (HARDI) 107, 353, 354,
 357–360, 362
 Huntington’s disease 347
 Hybrid echo 26
 Hypercapnia 427, 428, 433, 436
 Hyperthermia 215, 409, 433, 434
 Hypothermia 210, 239, 424, 427,
 431, 433, 434, 436
 Hypoxia 297, 298, 300, 427,
 428, 433, 436, 445
- I**
- Initial area under the curve (IAUC) 71
 Intracerebral microstimulation 119, 120
In utero MRI 285–295
 Inversion recovery (IR) 16, 26, 29–31,
 264, 301, 356, 366, 380, 389, 399, 404
 Inversion time (TI) 22, 29–31, 356, 399
 Iron 8, 34, 35, 42, 47, 206, 237,
 315–317, 325, 349, 356, 411, 447
 Iron oxide nanoparticle 25, 447
 Ischemia 45, 155, 189, 378,
 381, 387, 388, 434
 Isotopic enrichment (IE) 176
- K**
- K*-space 11, 13, 14, 27, 31, 56, 95, 96,
 99, 114, 140, 141, 145, 190, 194, 218, 225,
 229, 290, 291, 337, 353, 358
*K*_{trans} 73, 82, 83
- L**
- Lactate (Lac) 155, 162, 175,
 177, 184, 190, 331
 Larmor frequency 6, 7, 9, 10, 163, 182, 206
 Liposomes 442, 447, 449–453

M

Magnetic field gradient v, 6, 8, 9, 11, 34, 90, 103, 137, 163, 220, 299, 424

Magnetic moment 16, 24, 25, 152, 445, 447

Magnetic nanoparticle (MNP) 409, 414

Magnetic resonance angiography (MRA)
time-of-flight (TOF) 386

Magnetic resonance imaging (MRI) v, 3, 21–36, 41–56, 118, 270–272, 285, 300, 301, 315, 332, 347, 378, 382–386, 397, 398, 423, 441, 444

Magnetic resonance spectroscopy (MRS) 157, 158, 162, 164, 165, 171, 174, 191, 198
chemical shift imaging (CSI) 6, 189, 193, 237, 242, 243, 260, 264, 337, 378

¹³C MRS
distortionless enhancement by polarization transfer (DEPT) 171, 174

echo planar spectroscopic imaging (EPSI) 6

heteronuclear MRS 169, 171, 174, 176, 179, 182, 185

¹H MRS
LCModel 157, 158, 162, 164, 165

image selected in vivo spectroscopy (ISIS) 181

J-coupling 181

jMRUI
QUEST 191, 198

localized spectroscopy 158

magnetic resonance spectroscopic imaging (MRSI) 6, 189, 191, 331, 446

multivoxel 152, 452

³¹P MRS 152

point resolved spectroscopy (PRESS) 153, 189, 190

PRESS-MRSI 194

single voxel 152–154, 178

spin echo full intensity acquired localized spectroscopy (SPECIAL) 154, 178, 181

stimulated echo acquisition mode (STEAM) 154, 163, 181

Magnetic susceptibility 32, 35, 42, 113, 205, 206, 219, 222, 322, 349

Magnetoliposomes 442, 447–452

Manganese 286, 287, 410, 411

Manganese-enhanced MRI (MEMRI) 286

Mapshim 51, 96, 113, 128, 141

Mean arterial pressure (MAP) 434

Mean diffusivity 106

Medial cerebral artery occlusion (MCAO) 381

Metabolic rate 169, 427

Micro-sized particles of iron oxide (MPIO) 316–320, 322–325

Molecular MRI (mMRI) 315–325

Motion artifacts 108, 110, 111, 114, 215, 288, 433

Multimodal imaging 442–444, 449, 452

Myelin 90, 107, 349

Myocardial 269, 279, 434

Myo-inositol (*myo*-Ins) 155, 160, 162, 181

N

N-acetyl aspartic acid (NAA) 154, 160, 162, 190, 332

Nanoemulsion 235, 236, 238–241, 251, 254

Nanoparticle 25, 47, 239, 254, 409, 412, 414, 417, 446–449, 451

Neurite orientation dispersion and density imaging (NODDI) 354, 360

Neurodegeneration 45, 349, 359

Neurodegenerative disease 59, 297, 347–369, 444

Neurodegenerative disorder 35

Neuronal activation 118, 119, 122, 144

Neurovascular coupling 118, 120, 123

Nuclear Overhauser effect (NOE) 171

Null point 29, 31

Nyquist 110, 114

O

Obesity 259, 260, 267

Orthotopic 305, 307, 333, 335, 340–342

Osirix 75, 362

Outer volume suppression (OVS) 159, 164, 181, 194, 196

Oximetry 62, 298, 299, 301, 305–308, 437

Oxygenation 34, 62, 176, 206, 212, 214, 215, 297–309, 424, 428, 433, 434

Oxyhemoglobin 299, 308, 322

P

³¹P 152, 169–171, 176, 332, 337–340, 343, 446

Parallel imaging 145, 281

Paramagnetic compounds 42

Parametric imaging 43, 46, 50, 53, 94–96, 98, 139, 142, 143

Parametric map 112, 140, 143, 144, 363, 364, 380

Parkinson’s disease 36, 189

Partial parallel imaging (PPI) 99, 145

pCO₂ 433

Perfluorocarbon (PFC) 235–246, 248, 249, 251–255, 298–300, 303, 305, 309

Perfusion v, 4, 34–36, 41–45, 47, 50–53, 55, 145, 211, 222, 227, 269, 298, 302, 319, 350, 364, 365, 378, 379, 434, 445

Perfusion-diffusion mismatch (PDM) 45
 Perfusion weighted imaging (PWI) 41, 43, 45, 378, 379
 Permeability 4, 316, 395, 396, 406, 449
 Permeability surface area product 83
 pH 25, 189, 247, 318, 319, 323, 325, 442, 446, 452
 Pharmacodynamics 298
 Pharmacokinetics (PK) 381, 384, 409–417
 Phase encoding 11, 13, 22, 27, 28, 31, 34, 96, 99, 114, 140, 145, 215, 227, 309, 358
 Phase image 206, 207, 218, 220, 226, 229, 264
 Phase mask 206, 207
 Phosphocholine (PC) 109, 155, 156, 160, 162, 190, 191, 237, 331, 332, 339, 340
 Phosphocreatine (PCr) 155, 160, 162, 332, 340, 343
 Phosphodiester (PDE) 332, 340
 Phosphoethanolamine (PE) 332, 340
 Phospholipids 236, 251, 340
 Phosphomonoester (PME) 332, 340
 Physiological monitoring 47, 62, 63, 95, 121, 126, 140, 260, 261, 301–303, 424, 426, 427, 437
 Pixel-by-pixel analysis 382
 PO₂ 298–303, 305, 307–309, 364, 433
 pO₂ mapping
 DOCENT 298, 300–303, 305, 306, 309
 FREDOM 301, 307, 308
 Poly-methyl methacrylate (PMM) 46, 47
 Post labeling delay 63, 67, 68
 Proton density (PD) 18, 23, 24, 28, 33, 34, 63, 65, 67
 Pulse sequence 4–15, 18, 21, 22, 29, 43, 97, 142, 170, 207, 219, 242, 270, 281, 369, 386
 Pyruvate 175

Q

Quantitative imaging biomarkers (QIB) 14
 Quantitative susceptibility mapping (QSM) 219, 226, 357

R

R₁ 4, 17, 298, 299, 303, 305, 308, 309
 R₂ 46
 R2* 43, 206, 219, 227, 299, 303, 308
 Radial diffusivity 13, 106, 354
 Radio-frequency (RF) 5, 21, 60, 61, 207, 270, 271, 290, 339, 350, 397
 Rapid acquisition using radiofrequency echoes (RARE) 122, 190, 194, 290, 337, 389

Receiver gain (RG) 164
 Region of interest (ROI) 47, 98, 143, 303, 405
 Relaxation v, 4, 13–19, 23, 24, 29–32, 35, 42, 43, 46, 89, 122, 157, 163, 165, 171, 181, 196, 205, 227, 241, 242, 264, 290, 303, 305, 337, 340, 348, 349, 356, 366, 380, 386, 389, 409, 413, 429, 430, 445
 longitudinal relaxation 15–17, 23, 29, 65
 longitudinal relaxation time, (*see* T₁)
 relaxation rate, (*see* R₁; R₂; R2*)
 transverse relaxation 17, 18, 23, 32, 205, 380
 transverse relaxation time, (*see* T₂; T2*)
 Relaxivity 4, 25, 309, 447
 Repetition time (TR) 11, 14, 22, 63, 91, 130, 157, 190, 218, 261, 271, 290, 300, 337, 348, 354, 398, 412, 413
 Respiratory system 433
 Resting state 119, 121, 144
 RF channel 174
 RF coil 45, 50, 61, 62, 65, 91, 128, 138, 157, 174, 190, 207–209, 270, 271, 273, 278, 280, 282, 286, 303, 350, 352, 397, 401, 412
 birdcage resonator 350, 397
 phased array coil 286–288, 293
 surface coil 45, 47, 65, 67, 91, 95, 132, 138, 140, 157, 162, 174, 185, 271, 286–288, 351, 397
 volume coil 45, 47, 65, 91, 95, 138, 140, 157, 286, 287, 351, 397

S

Segmentation 260, 264, 265, 271, 349, 353, 361, 366, 369, 399
 Segmented EPI 96, 97, 99, 113, 141, 142, 145
 Self-gating 281
 Short TI inversion recovery (STIR) 30, 31, 35
 Signal-to-noise ratio (SNR) 55, 96, 108, 121, 124, 141, 270, 300, 335, 348
 Single-shot EPI 96
 Slice selection 9, 10, 14, 22, 27, 44, 113, 243, 303
 Slow diffusion coefficient (D_{slow}) 137, 141, 143
 Slow diffusion phase (SDP) 141, 143, 144
 Spatial response function (SRF) 190
 Specific absorption rate (SAR) 23, 30
 Spin density (NH) 89, 241
 Spin dephasing 89, 205
 Spin-echo (SE) 14, 23, 27, 90, 96, 130, 136, 140
 Spoiled gradient-echo 26, 66, 206, 300

Statistical parametric mapping (SPM)63, 122, 281
 Steady state34, 123, 126, 176,
 182, 184, 396
 Stejskal-Tanner (ST) 91, 95, 136, 353, 379
 Stimulated echo (STE) 154
 Stroke 36, 45, 54, 59, 67, 104, 154,
 243, 297, 316, 347, 356, 359, 377–390, 395
 Stroke volume (SV).....279
 Superparamagnetic nanoparticles 25, 447
 Susceptibility artifacts 113, 207, 222, 389, 416
 Susceptibility-weighted imaging (SWI) 34,
 205–207, 209, 213, 218–221, 224–227, 230,
 357, 381, 386, 387

T

T_1 3, 4, 15–18,
 23–25, 28, 30, 32–35, 42, 52, 60, 67, 68, 89,
 90, 146, 165, 171, 200, 222, 242, 288, 289,
 298, 300, 301, 303, 307–309, 337, 340, 348,
 351, 356, 358, 359, 361, 363, 378, 380, 396,
 404, 405, 407, 416, 447, 452
 T_1 relaxation 15, 30, 340, 348, 356, 366
 T_1 -weighted4, 18, 23, 66, 163, 252,
 288, 289, 294, 306, 337, 343, 349, 355, 356,
 363, 366, 396, 405, 412, 453
 T_2 3, 23, 24, 42, 89, 122,
 140, 157, 171, 193, 242, 262, 289, 305, 348,
 380, 412, 445
 T_2 relaxation 16, 17, 32, 380
 T_2 -weighted4, 14, 17, 19, 64,
 122, 131, 157, 158, 178, 252, 288–292, 294,
 356, 366, 389, 412, 413, 415, 416, 451
 T_2^* 23, 24, 32–35, 42, 43, 46,
 50, 52, 56, 89, 125, 225, 264, 288, 289,
 298–300, 303, 305, 308, 316, 356, 380, 381,
 387, 447
 T_2^* relaxation43, 90, 367
 T_2^* -weighted 206, 219, 288,
 289, 299, 301, 303, 306, 316, 380, 389, 416
 Target112, 119, 126, 175, 176,
 182, 183, 211, 236, 237, 239–242, 245, 248,
 249, 254, 287, 290, 315, 316, 318–322, 325,
 409, 410, 425, 431, 442, 444–447, 449
Theranostic442, 447, 449, 452

Tissue oxygen level dependent (TOLD)299,
 300, 303, 306, 308
 Transit time 43, 44, 67, 68
 Tricarboxylic acid cycle (TCA)..... 175
 Tridimensional (3D) 6, 9, 51,
 96, 141, 215, 219–221, 226, 227, 229, 230,
 243, 246, 247, 263, 285, 286, 288–292, 322,
 323, 336–338, 343, 348, 357–359, 386, 424
 Tumor 4, 5, 25, 36, 45,
 59, 154, 155, 297–300, 303, 305–308, 316,
 332, 333, 335, 337, 339–343, 355, 396, 445,
 449, 451–453
 Tumor oxygenation 299
 Turbo spin echo (TSE)30, 31, 262

U

Ultrafast gradient echo 26
 Ultra-fast spin echo 26
 Ultra-short echo time (UTE).....270, 273, 281, 282

V

Ventilation251, 433, 435, 436
 Ventricular 279, 356
 Volume of interest (VOI)96, 141, 190, 193, 243
 Voxel based analysis (VBA) 349, 363

W

Water suppression
 chemical shift selective (CHESS) 163, 181
 variable power and optimized relaxation delays
 (VAPOR) 163, 164, 181, 196, 198, 343
 White matter (WM) 29, 35, 65, 106,
 107, 200, 226, 294, 348, 349, 355, 359, 360,
 363, 364, 379, 380, 388

X

Xenograft 305, 307, 308, 333, 335, 340–342
 X-nuclei 169–171
 Xylazine 65, 221, 301, 302, 348, 429

Z

Zero crossing point 29