

Index

- abdomen
 anomalies, 158–60
 tumors, 193, 198–9
 ultrasound, 69, 75, 79
 abdominal circumference, 176, 269, 273
 abdominal wall
 anomalies, 156–8
 development, 63
 ABO hemolytic disease, 218
 abortion, 254
 complications, 251, 261–2
 conscientious objection, 245
 epidemiology, 247–9
 feticide, 246, 250, 254–5
 forms, 244
 live fetus after, 246–7
 medical conditions, 248
 methods, 255, 256–60
 Northern Ireland, 245–6
 post-abortion care, 265–8
 pre-abortion care, 254
 spouse/partner rights, 245
 statutory grounds for, 243–4
 two doctors in good faith, 244–5
 under Ground E, 249, 250
 Abortion Act 1967, 243–5
 Abortion Notification (HSA4) forms, 244, 247
 ACE inhibitors, 236
 achondrogenesis, 169, 176, 178
 achondroplasia, 12
 aciclovir, 211
 adult polycystic renal disease, 185
 AFP (alpha-fetoprotein), 33, 37, 157
 agenesis of the corpus callosum (ACC), 84–6
 AIDS, 47
 allelic heterogeneity, 11
 alloimmune thrombocytopenia, 230
 alpha-thalassemia, 44
 alveolar capillary dysplasia, 152
 ambiguous genitalia, 190
 amniocentesis, 7, 337, 340
 performing, 341
 third trimester, 342
 amnionity, 303–4
 amniotic band syndrome, 335
 amniotic fluid, 332–3
 assessment, 290, 333
 polyhydramnios, 333–4
 production, 333
 reduction, 334–5
 spectrophotometry, 223
 volume, 179, 273
 anemia, 209, 210, 345, 346
 analgesics, 232–4, 259
 anencephaly, 82
 aneuploidy, *see also* Down's syndrome
 genetic counseling, 21
 midtrimester scan, 38–9
 multiple pregnancy, 304–5
 NIPT, 41
 nuchal translucency, 34, 35
 screening, 338
 aneurysm of the vein of Galen, 92, 195
 Angelman syndrome, 26
 anhydramnios, 334
 antenatal counseling, 19, 231
 advanced maternal age, 20
 chromosome disorders, 22–3
 co-incidental findings, 27–8
 consanguinity, 30
 ethnicity and, 30
 family history recurrence risk, 28
 fetal aneuploidy, 21
 genetic disorders, 21–2
 maternal disease, 31
 single gene disorders, 23, 24–7
 ultrasound-detected anomalies, 29–30
 antenatal screening, 32, *see also* ultrasound
 criteria, 32
 current recommendations, 40
 cystic fibrosis, 41–3
 factors affecting results, 38
 first trimester, 34–7
 hemoglobinopathies, 43–4
 infections, 45–9
 infections not covered, 49–51
 multiple pregnancy, 304–6
 neural tube defects, 34
 pretest counselling, 32
 principles of, 33
 red cell alloimmunization, 221
 second trimester, 37, 38–9, 40
 shared placental complications, 306–9
 UK routine offerings, 33
 antepartum hemorrhage, 328
 anthracycline, 237
 antiasthmatics, 235
 antibiotics, 213, 235, 236
 antibodies, 201, 203, 204, 217
 anti-K, 217
 multiple maternal, 218
 rhesis, 218
 anticoagulants, 234–5
 anticonvulsants, 234
 anti-D immunoglobulin, 218–20, 265
 antiemetics, 235
 antihypertensives, 235–6
 anti-K antibody, 217
 antineoplastics, 236–7
 antiretrovirals, 235, 343
 aortic stenosis or atresia, 119
 aplasia, 150–1
 arachnoid cysts, 87, 88, 91, 194
 arrhythmias, 127–35
 Ashkenazi Jewish people, 30
 aspirin, 232, 278
 assisted reproductive technology (ART), 298, 300
 astrocytomas, 193
 asymptomatic bacteriuria, 45
 atrial flutter, 135
 atrioventricular septal defect (AVSD), 105, 109, 126, 128
 autopsy. *See* perinatal autopsy
 autosomal dominant disorders, 1, 24–6
 autosomal recessive disorders, 1, 25, 26
 axial system, 58
 bacterial vaginosis, 49
 balanced translocation, 22
 battledore placenta, 322
 beta-thalassemia, 44
 biophysical profile, 292
 biparietal diameter, 71
 bladder exstrophy, 190
 bladder outlet obstruction, 187–8
 Blake's pouch cyst, 87, 88

Index

- blind testing, 11, 12
 bradycardia, 132
 brain
 development, 55
 ultrasound, 68, 72, 78
 bronchogenic cysts, 147–8
 bronchopulmonary sequestration, 143
- cesarean section, 258–9, 314
 carbamazepine, 234
 carbimazole, 237
 cardiac. *See* heart
 cardiotocography (CTG), 277, 290–1, 292, 293
 central nervous system (CNS)
 anomalies, 81–94
 cysts and vascular malformations, 194–5
 tumors, 193, 254–5
 cephaloceles, 83, 84
 cerebral lesions, 89–90
 cervical priming, 260
 cervical teratoma, 196
 cfDNA (cell-free DNA), 41
 chemotherapy, 327
 chlamydia, 49, 261
 chorangiomas, 323–4
 chorionic villus sampling (CVS), 8, 17, 337, 339–40
 performing, 341
 chorionicity, 303–4
 choroid plexus cysts, 91, 194
 choroid plexus tumors, 194
 chromosome abnormalities, *see also*
 Down's syndrome
 antenatal counseling, 22–3, 24–7
 co-incident findings, 27–8
 constitutional, 1
 detection methods, 7–11
 detection protocols, 11–14
 chromosome structure, 3
 chylothorax, 148–50
 circulatory system development, 60
 circumvallate placenta, 322
 cleavage stage, 53
 cleft lip and palate, 96–7
 cloacal exstrophy, 189
 coarctation of aorta, 110, 120, 126, 128
 codons, 3
 combined screening test, 36–7
 complete molar pregnancy, 324
 congenital abnormalities, 28, 35
 abortions, 248, 249
 congenital diaphragmatic hernia (CDH), 141–2, 352–3
 congenital heart disease (CHD), 35,
 see also heart anomalies
 genetic syndromes and, 124, 125
 genetics, 126
- incidence, 123
 inlet valve defects, 121–3
 intracardiac shunts, 103–6
 nuchal thickness, 99
 outflow tract abnormalities, 106–17
 recurrence risk, 124, 127
 risk factors, 124
 severity of, 111
 stenotic lesions, 117–20
 congenital lobal emphysema, 146–7
 congenital lung malformations, 139
 CCAML, 142–4
 pulmonary agenesis, 150–1
 pulmonary sequestration, 144–6
 ultrasound, 140, 145
 vascular, 151–2
 congenital rubella syndrome (CRS), 214
 conjoined twins, 308, 318
 consanguinity, 30
 contraception, 265
 copy number variants, 8
 cord entanglement, 318
 cord occlusion, 351–2
 cortical malformations, 93
 corticosteroids, 229, 237, 313
 craniopharyngiomas, 194
 crown rump length (CRL), 67, 302
 customized growth charts, 271–2
 cyst posterior fossa anomalies, 87–9
 cystic congenital adenomatoid malformation of the lung (CCAML), 142–4
 cystic fibrosis
 antenatal screening, 41–3
 genetic counseling, 22
 genetic testing, 17
 cystic hygroma, 35, 99, 195–6
 cytomegalovirus (CMV), 50, 90, 202, 203–5
 cytoscapy, 349–51
- D antigen, 217
 Dandy–Walker malformation, 87, 88
 Dawes–Redman criteria, 291
 delivery
 morbidly adherent placenta, 332
 multiple pregnancy, 314
 destructive cerebral lesions, 89–90
 diabetes, 237, 270, 282
 diaphragm development, 61
 dilatation and evacuation, 250, 256, 260
 DISCERN methodology, 32
 dizygotic twins, 297, 298, 316
 DNA, 3
 cfDNA, 41
 ffDNA, 16–17, 221
- DNA testing, 11, 12
 Doppler ultrasound, 222–3, 274–7, 286–9
 double inlet left ventricle, 109, 122, 126, 128
 double outlet right ventricle, 106, 110, 126, 128
 Down's syndrome, 20, 21, *see also*
 aneuploidy
 abortions, 248, 249
 affected pregnancies, 37
 antenatal counseling, 22
 antenatal screening, 34, 246, 249
 first-trimester screening, 34–7
 multiple pregnancy, 305
 second-trimester screening, 37, 38–9, 40
 Duchenne muscular dystrophy (DMD), 11, 17, 27
 ductus venosus, 36, 102, 276, 288–9
 duodenal atresia, 159
- Ebstein's anomaly, 109, 122, 126, 128
 ECG monitoring, 294
 echogenic bowel, 39, 159, 273
 echogenic cardiac foci, 39
 embryology
 abdominal wall, 63
 circulation system, 60
 diaphragm, 61
 face and pharyngeal arches, 58
 gastrointestinal system, 63–4
 genital system, 64
 genitourinary system, 64, 182
 heart, 58–60
 lung development, 139–41
 nervous system, 54–7
 respiratory system, 62
 skeletal system, 57–8
 stages of development, 53–4
 embryonic period, 53
 enzyme immunoassay (EIA) test, 48, 49
 ependymomas, 194
 epigenetic disorders, 2
 ergotamine, 238
 esophageal atresia, 158
 estimated fetal weight (EFW), 269, 272, 273, 306
 ethnicity, 30, 324
 exclusion testing, 15
 EXIT procedure, 196, 197
 exomphalos, 156–7
 exons, 3
 extralobar lesions, 145, 146
 extremities, sonography, 174
- face
 anomalies, 96–9, 100

- development, 58
 - ultrasound, 69, 72, 78, 175
- femoral anomalies, 180
- femur length: abdominal
 - circumference (FL/AC), 176
- fetal anomalies
 - multiple pregnancy, 299, 305
 - second-trimester scan, 71
 - ultrasound detected, 29–30
- fetal biometry, 71, 273, 286
- fetal blood sampling (FBS), 140, 223–4,
 - 229, 293–4, 337, 340–1
 - performing, 341
- fetal growth, 269
- fetal growth disorders, 283
 - etiology, 270–1
 - definition, 269–70
 - management, 278–82
 - morbidity, 282–3
 - screening and diagnosis, 271–8
- fetal growth restriction (FGR), 269
 - early onset or preterm, 281–2
 - intrauterine, 165, 173
 - late onset, 280–1
 - multiple pregnancy, 299, 300, 305–6
 - selective, 307–8, 315, 317–18
- fetal heart monitoring, 292–3
- fetal labeling, 304
- fetal pulse oximetry, 293
- fetal sexing, 16
- fetal stroke, 89, 90
- fetal surgery, 353
- fetal therapy, 345
 - cytосcopy, 349–51
 - drugs, 345
 - shunt insertion, 347–9
 - transfusions, 345–7
- fetal tissue, sensitive disposal, 266–7
- fetal tracheal occlusion, 352–3
- fetal wellbeing
 - amniotic fluid assessment, 290
 - biophysical profile, 292
 - cardiotocography, 290–1
 - Doppler ultrasound, 286–9
 - intrapartum assessments, 292–4
 - tests, 286
 - ultrasound for biometry, 286
- feticide, 246, 250, 254–5
- fetomaternal haemorrhage (FMH),
 - 216, 219
- fetoscopic laser ablation, 317
- fetoscopic laser coagulation, 350–1
- fibromas, 198
- first-trimester scan, 67–70
- first-trimester screening, 34–7
- fluorescent in situ hybridisation, 8
- forearm anomalies, 171, 179
- Fragile X syndrome, 12, 27
- fragment analysis, 14
- gastrointestinal atresias, 158–9
- gastrointestinal system development,
 - 63–4
- gastroschisis, 157–8
- gastrulation, 53, 57
- gemeprost, 256, 260
- genes, 1, 3–4, *see also* single gene disorders
- genetic disorders
 - antenatal counseling, 21–2
 - types and classification, 1–3
- genetic services organization, 7
- genetic sonograms, 40
- genetic testing
 - examples, 17
 - linked polymorphisms, 14–16
 - methods, 7–11
 - single-gene disorders, 11–14
 - skeletal anomalies, 161
- genital system development, 64
- genitourinary system, *see also* renal system
 - bladder outlet obstruction, 187–8
 - embryology, 64, 182
 - vesicoureteric reflux, 188
- genome
 - chromosome structure, 3
 - gene structure and function, 3–4
 - organization, 4–5
- gestation weeks
 - abortions, 247, 250, 251
 - medical abortions, 257–8
 - multiple pregnancy, 302
- gestational trophoblastic disease (GTD), 324–5
 - follow up, 326
 - management, 326–7
- Group B streptococcus, 50
- hemoglobinopathies, 43–4
- hemolytic disease (HDFN), 216
 - epidemiology and incidence, 217–18
 - management, 220–4
 - management protocol, 224–5
 - pathophysiology, 216–17
 - prevention, 218–19
- hemophilia, 5, 17
- hemorrhage, *see also* intracranial haemorrhage
 - abortion, 261
 - antepartum, 328
- hamartoma, 152
- hCG levels, 37, 326–7
- head circumference (HC), 71, 90
- head tumors, 195–7
- heart
 - development, 58–60
 - dimensions at 20 weeks, 106
 - monitoring, 292–3
 - tumors, 92, 193, 197–8
 - ultrasound, 69, 73–6, 102, 105
- heart anomalies, 39, *see also* congenital heart disease (CHD)
 - antenatal and postnatal management, 102
 - diagnostic features, 103
 - ultrasound, 102, 103
- heart block, 132
- heparins, 234
- hepatic tumors, 198
- hepatitis B, 46–7, 240
 - serologic tests, 46
- hepatitis C, 50
- herbal products, 239
- heroin, 238
- heteroplasmy, 2
- HIV (human immunodeficiency virus), 47
- holoprosencephalies, 84, 86
- homoplasmy, 2
- Human Fertilisation and Embryology Act 1990, 243
- human platelet antigen (HPA) system, 227
- Human Tissue Act (2004), 360
- Huntington's disease, 14, 15
- hydatidiform mole, 324, 327–8
- hypertelorism, 100
- hypomineralization, 174, 178
- hypoplasia, 150–1
- hypoplastic left heart syndrome, 109,
 - 117, 126, 128
- hypotelorism, 100
- IgG antibodies, 201, 203, 204, 322
- IgM antibodies, 201, 203, 204
- imprinting, 2, 26
- in utero treatment, 142
- incomplete abortion, 261
- indomethacin, 334
- infantile polycystic disease, 184
- infections, 201
 - abortion, 261–2
 - clinical presentations, 201–3
 - screening, 45–9
 - ultrasound, 202
 - ultrasound-guided diagnoses, 343
- influenza, 240
- Inhibin A, 37
- inlet valve abnormalities, 121–3
- intermittent auscultation, 292
- interrupted aortic arch, 120
- intra-abdominal calcification, 159
- intra-abdominal cysts, 159
- intracardiac shunts, 103–6
- intracranial cysts and tumors, 91–2

Index

- intracranial hemorrhage, 89–90, 227, 228
- intralobar lesions, 145, 146
- intrapartum assessments, 292–4
- intraperitoneal transfusion, 224, 346
- intrauterine fetal growth restriction (IUGR), 165, 173
- intrauterine growth restriction (IUGR), 206
- intrauterine infections, 90
- intrauterine transfusion, 223–4, 345–6
- intravascular transfusion, 346
- intravenous immunoglobulin (IVIG), 228, 229
- introns, 3
- in-vitro fertilization (IVF), 298
- ionizing radiation, 239
- iron transport, 322
- isotretinoin, 238
- Joubert syndrome, 87, 88
- karyotyping, 7–8
- Kell blood group, 216, 217
- Kleihauer Betke test, 219
- labetolol, 235
- lactate, 293–4
- lactation suppression, 265
- Lambda sign, 303
- lamotrigine, 234
- laparoscopy, 365
- large bowel atresias, 159
- large for dates (LFD), 270, 271, 282, 283
- large-scale rearrangements, 5
- laryngeal atresia, 152–4
- laryngeal cysts, 154
- laryngeal lymphangiomas, 154
- limb girdles, 174
- limbs
 - anomalies, 172, 179, 180
 - development, 162–4
 - ultrasound, 70, 76, 79, 173–7
- linkage approach, 11
- lobectomy, 146
- locus heterogeneity, 11
- lower limb anomalies, 172
- lower urinary tract obstruction, 347, 349
- lung biometry, 140
- lung cysts, 152
- lung development, 62, 139–41, *see also* congenital lung malformations
- lunghead ratio (LHR), 140, 142
- lung tumors, 152
- lymphangiomas, 154, 195–6
- magnetic resonance imaging (MRI), 93, 329, 364–5
- maternal age
 - advanced, 20
 - Down's syndrome, 34
 - multiple pregnancy, 298
- maternal disease, 31
 - fetal growth disorders, 270, 271
 - skeletal anomalies, 161, 163
- maternal drug ingestion, 161, 163
- maternal serology, 221–2, 273
- maximum pool depth (MPD), 273, 290, 333
- medical abortion, 256
 - delayed expulsion, 258
 - gestation weeks and, 257–8
 - pain relief, 259
 - placenta evacuation, 258
 - prior cesarean section, 258–9
- medulloblastoma, 194
- megacisterna magna, 87
- megacystis–microcolon–intestinal–hypoperistalsis syndrome, 188
- mental retardation, 28
- metformin, 237
- methotrexate, 236
- methyldopa, 236
- microarray-CGH, 8–11
- microcephaly, 90–1
- micrognathia, 97–9
- middle cerebral artery (MCA), 222–3, 275, 288
- midline anomalies, 84–7
- mifepristone, 256–8, 260
- miscarriage, 339
- misoprostol, 238, 256–8, 260, 261
- mitochondrial gene mutations, 2
- mitral atresia, 122
- MNS system, 218
- monoamniotic twins, 303, 318–19
- monochorionic twins, 351–2
- monozygotic twins, 297, 299, 305, 314, 316
- morbidly adherent placentation, 329–32
- mosaicism, 1, 7, 8, 24
- MRSA, 343
- multicystic dysplastic kidney, 184
- multifactorial disease, 2
- multifetal pregnancy reduction, 311–12
- multiple maternal antibodies, 218
- multiple pregnancy
 - amnicornity and chorionicity, 303–4
 - aneuploidy screening, 304–5
 - diagnosis, 302
 - epidemiology, 297–9
 - fetal abnormality screening, 305
 - fetal risks, 299–300
 - general management, 312–15
 - gestational dating, 302
 - impact, 300
 - labeling fetuses, 304
 - management of complicated, 315–19
 - maternal risks, 299
 - perinatal outcome, 300
 - preterm labor and delivery, 309
 - ultrasound-guided diagnoses, 342–3
 - zygosity, 297
- multiplex ligation probe assay, 12, 14
- mutations, types of, 5–7
- myelomeningocele, 353
- myxoma, 198
- nasal bone hypoplasia, 36
- National Down's Syndrome Cytogenetic register (NDSCR), 249
- neck
 - anomalies, 99–100
 - tumors, 193, 195–7
 - ultrasound, 68
- needle aspiration, 347
- negative predictive value (NPV), 33
- nervous system development, *see also* central nervous system (CNS)
- nervous system development, 54–7
- neural tube defects, 82–4
 - screening, 33–4
- neuroblastoma, 198
- neuroepithelial tumors, 194
- next-generation sequencing (NGS), 13–14, 173
- noninvasive prenatal diagnosis (NIPD), 16–17
- noninvasive prenatal testing (NIPT), 7, 41, 305, 337
- NSAIDs, 234, 259
- nuchal thickness, 99
- nuchal translucency (NT), 34–5, 99–100, 178
 - ultrasound, 68
- obstetric history, 220
- obstructive cystic dysplasia, 185
- oligohydramnios, 151, 335
- omphalocele, 156–7
- opioids, 234
- oral contraceptives, 238, 326
- organs, retention, 362
- osteogenesis imperfecta (OI), 169, 172, 173, 175
- outflow tract abnormalities, 106–17
- ovarian cyst, 190

- PAPP-A, 37, 273
paracetamol, 232
partial molar pregnancy, 325
parvovirus, 35, 202, 208–10
paternal testing, 221
PCR-based copy number analysis (QF-PCR), 8
peak systolic velocity, 222–3
pelvic kidney, 183
pelvic tumors, 198–9
pelviureteric junction (PUJ), 186
penicillin, 213, 235
perinatal autopsy
 clinical care, 357
 consent requirements, 360
 consented versus coronial, 359–60
 functions, 356–7
 imaging and minimally invasive, 364–5
 limited, 362
 placental examination, 363–4
 practical aspects, 360–3
 prevalence and consent refusal, 359
 value of, 357–9
perinatal deaths, classification, 359
pH, 293–4
pharyngeal arches, 58
placenta
 abruption, 328–9
 development, 321
 developmental abnormalities, 322–3
 examination, 363–4
 morbidly adherent, 329–32
 shared complications, 300, 306–9
 surgical evacuation, 258
 trafficking, 321–2
 vascular anomalies, 323–4
placenta praevia, 323
pleural effusions, 148–50
pneumonia, 210, 211
point mutations, 5
polio, 240
polyalveolar lobe, 151
polyhydramnios, 98, 333–4
polymerase chain reaction (PCR), 8, 12
positive predictive value (PPV), 33
positive screening test, 201–2
post-abortion care, 265–8
posterior fossa cyst anomalies, 87–9
posterior urethral valve, 187
postmortem examination.
 See perinatal autopsy
potassium chloride, 255
Potter disease, 184, 185
Prader–Willi syndrome, 2
pregnancy
 counseling and management, 231–2
 ionizing radiation, 239
 medications and, 232–8
 prescribing in, 231–2
 substance misuse, 238
 vaccinations in, 239, 240
pre-implantation genetic diagnosis, 15
premature atrial contractions, 127–32
preterm birth, 299
preterm labor and delivery, 309, 314–15
primary maternal infection, 201–2
progesterone, 314
progesterone antagonists, 250, 256
propylthiouracil, 237
prostaglandin, 250, 256
psychological stress, abortion, 266
psychotropics, 237
pulmonary agenesis, 150–1
pulmonary arteriovenous malformations, 151
pulmonary atresia, 108, 110, 117, 126, 128
pulmonary hypoplasia, 140, 150, 176, 183, 352–3
pulmonary isomerism, 151
pulmonary lymphangiectasis, 152
pulmonary sequestration, 144–6
pyrosequencing, 13

Quintero staging, 307

RCOG guidelines, 254, 255, 343
reciprocal translocations, 22
recurrence risks, 28, 124, 127
red cell alloimmunization, 216–25
reduced fetal movements, 286
renal mass, 198
renal pyelactasis, 39
renal system
 agenesis, 183
 cystic disease, 184–6
 development, 64, 65
 function, 182
 obstruction, 186
 PUJ obstruction, 186
 ultrasound, 76, 78
 urinary tract, 182
 VUJ obstruction, 186
respiratory system development, 62
restriction fragment length polymorphisms, 15
retinitis pigmentosa, 2
rhabdomyoma, 197
rhesus antibodies, 218
 prophylaxis, 265
rhesus antigens, 216, 217

rhesus disease. *See* hemolytic disease (HDFN)
rhesus testing, 16
risk calculations, 40
Robertsonian translocations, 22
RPR test, 48, 212, 213
rubella, 45, 201, 202, 213–15, 240

sacrococcygeal teratoma, 199
safety, ultrasound, 67
Sanger sequencing, 12, 13
scimitar syndrome, 145, 152
second-trimester scan, 71–3
 structural survey, 72–8
second-trimester screening, 37, 38–9, 40
selective feticide, 246
selective growth restriction, 307–8, 317–18
selective growth syndrome, 315
septum pellucidum, absence, 86
serial amnioreduction, 350
serology, 203, 204
 maternal, 221–2, 273
serum analyte selection, 37
shared placentation complications, 300
 management, 316–19
 screening, 306–9
short limbs, 39, 165, 173
shunt insertion, 150, 347–9
sickle cell disorders, 44
 laboratory tests, 44–5
single fetal death, 315–16
single-gene disorders, 1–2
 antenatal counseling, 23, 24–7
 detecting, 11–14
single nucleotide polymorphisms, 15
skeletal anomalies, 161
 differential diagnosis, 171
 family history, 161
 maternal factors, 161, 163
 sonography, 163–79
 terminology, 162
skeletal system development, 57–8
skull
 development, 57
 ultrasound, 174
small bowel atresias, 159
small for gestational age (SGA), 269, 270, 271, 299, 305
 management, 278–80
sodium valproate, 234
somatic genetic diseases, 2
spectrophotometry, 223
spina bifida, 82–3, 84
spinal cord
 development, 56
 tumors, 194

Index

- spine
 - development, 57–8
 - ultrasound, 70, 76, 178, 179
- spiramycin, 207
- spontaneous rupture of membranes, 335
- statins, 238
- stenotic lesions, 117–20
- stimulation tests, 293
- substance misuse, 238
- suction curettage, 325
- supraventricular tachycardia, 133–5
- sympheal fundal height, 272
- syphilis, 47–8, 202, 211–13
 - classification, 48
 - screening tests, 48–9
- T sign, 303
- tachycardia, 133–5
- teratomas, 152, 192, 198, 199
- tetralogy of Fallot, 106, 110, 126, 128
- thalassemias, 44
 - laboratory tests, 44–5
- third-trimester tests, 342
- thoracoamniotic shunting, 347
- thorax, *see also* lung development
 - ultrasound, 73, 78, 139, 175–6
- thorax anomalies, *see also* congenital lung malformations
 - bronchogenic cysts, 147–8
 - congenital diaphragmatic hernia, 141–2
 - laryngeal malformations, 152–4
 - pleural effusions and cyclothorax, 148–50
- thrombocytopenia, 227–30
- thrombosis of the dural sinuses, 93
- thyroid disorders, 237
- tissue samples, disposal, 362
- TORCHS test, 202
- total anomalous pulmonary venous connection (TAPVC), 109, 126, 128
- toxoplasma, 50, 202, 205–8
- tracheoesophageal fistula, 158
- transposition of the great arteries, 108, 110, 126, 128, 319
- treponemal tests, 48, 49
- tricuspid atresia, 109, 121, 126, 128
- tricuspid regurgitation, 36
- trinucleotide repeat mutations, 7
- triplets, 297, 311
- trisomy, 20
 - sonography, 38
- truncus arteriosus, 108, 110, 126, 128
- tuberous sclerosis, 25, 92, 197
- tumors, 192
 - abdomen and pelvis, 193, 198–9
 - cardiac, 92, 193, 197–8
 - CNS, 193, 254–5
 - head and neck, 193, 195–7
 - intracranial, 91–2
 - location and type, 192
 - lung, 152
 - management, 199
- twin anemia polycythemia sequence (TAPS), 308, 318
- twin anaemiapolycythaemia sequence (TAPS), 300
- twin reversed arterial perfusion sequence (TRAP), 300, 308, 318
- twintotwin transfusion syndrome (TTTS), 300, 306–7
 - management, 316–17
 - treatment, 350–1
- uE3 (unconjugated estriol), 37
- ultrasound, 29–30, *see also* antenatal screening
 - Doppler, 222–3, 274–7, 286–9
 - extended examination, 79
 - fetal biometry, 286
 - fetal growth disorders, 273–7
 - first trimester, 67–70
 - heart, 69, 73–6, 102, 105
 - heart anomalies, 102, 103
 - infections, 202
 - lung malformations, 140, 145
 - pre-requisites, 67
 - second-trimester scan, 71–8
 - skeletal anomalies, 163–79
 - thorax, 139
 - urinary tract, 182
- ultrasound-guided diagnoses, 337
 - aneuploidy screening, 338
 - counseling and consent, 338
 - fetal therapy, 345–7
 - indications for, 338
 - more complex procedures, 342–3
 - performing, 340–2
 - risks, 339
 - shunt insertion, 347–9
 - technical competence, 343
 - techniques, 339–41
 - which test and when, 337–8
- umbilical artery Doppler, 274, 288
- uniparental disomy, 2, 22
- ureterocele, 189
- urethral atresia, 188
- urinary tract, 182
- urogenital system. *See* genitourinary system
- uterine artery Doppler, 273, 287
- uterine perforation, 258, 262
- vaccinations, 201
 - pregnancy, 239, 240
- vacuum aspiration, 250, 259
- vanishing twin syndrome, 315–16
- variable number of tandem repeat polymorphisms, 15
- variant of uncertain significance, 10
- varicella, 202, 210–11, 240
- vasa praevia, 322
- vascular anomalies, 92, 151–2, 323–4
- vascular occlusion, 351–2
- VDRL test, 48, 212, 213
- vein of Galen aneurysm, 92, 195
- velamentous insertion of umbilical cord, 322
- ventricular septal defect (VSD), 103, 109, 126, 128
- ventricular tachycardia, 135
- ventriculomegaly, 81–2
- vermian hypoplasia, 87, 88
- vesicoamniotic shunting, 347–9
- vesicoureteric junction (VUJ), 186
- vesicoureteric reflux, 188
- visceral anomalies, 178
- warfarin, 234
- whole-genome sequencing, 13
- X-autosome translocation, 23
- X-linked disorders, 2, 25, 26–7
- Y-linked disorders, 27
- zygosity, 297