

- Betamethasone, 347, 462e-19  
 Beta ( $\beta$ ) radiation, 263e-1  
 Betaxolol, 1589t  
 Bethanechol, 473e-10t, 2673, 2716  
 Bethesda assay, 735, 740  
 Bevacizumab  
   action and targets of, 102e-5t, 102e-16f, 102e-17, 103e-21, 103e-21t  
   adverse effects of, 102e-17, 103e-21, 103e-26, 520  
     hemoptysis, 1794  
     hypersensitivity reaction, 1798  
     nephrotoxicity, 1804, 1864  
     neurologic, 607, 607t  
   for brain metastases, 605  
   for breast cancer, 102e-17, 530-531  
   for cholangiocarcinoma, 553  
   for colorectal cancer, 102e-5t, 102e-17  
   for esophageal cancer, 533  
   for gastric cancer, 535  
   for glioblastoma, 102e-5t, 600, 601f  
   for hepatocellular carcinoma, 550-551  
   for lung cancer, 102e-17, 520, 520t  
   for macular degeneration, 205  
   for ovarian cancer, 594  
   for renal cell carcinoma, 102e-5t  
 Bexarotene, 103e-17t, 103e-20  
 Bezold-Jarisch reflex, 100  
 bFGF (basic fibroblast growth factor), 102e-14, 102e-15f, 2265  
 Bhanja virus, 1309t  
 Bias, in screening tests, 479-480  
*BIB1* gene, 462e-14  
 Bicalutamide, 103e-15, 585  
 Bicarbonate  
   in pancreatic secretion, 2090  
   renal transport of, 332e-3f, 332e-6  
 Bicarbonate therapy  
   for DKA, 2419  
   for hyperkalemia, 312  
   for hypovolemia, 298  
   for internal radionuclide contamination, 263e-6t  
   for lactic acidosis, 318  
   for metabolic acidosis, 318  
   for salicylate-induced acidosis, 319  
   for sepsis/septic shock, 1757  
   for uremic acidosis, 320  
 Bicarbonaturia, 299, 305  
 Bicipital tendinitis and rupture, 2248  
 Bicuspid aortic valve disease, 1529  
 Bifascicular block, 1455, 1476, 1476t. *See also* Atrioventricular (AV) conduction block  
 Bifid pulse, 1445  
 Bifid uvula, 1443  
 Biguanides. *See also* Metformin  
   advantages of, 2414t  
   adverse effects of, 318  
   contraindications to, 2414t  
   for diabetes mellitus, 2413, 2414t, 2416  
   for metabolic syndrome, 2454  
   pharmacology of, 2414t  
 Bilateral simultaneous stimulation  
   test, 160  
 Bilberry, 404t  
 Bile  
   composition of, 2075  
   effects on esophageal epithelium, 1907  
   functions of, 1875  
   hepatic, concentration within gallbladder, 2076  
   leak, from duct of Luschka, 1885f  
   limey, cholecystitis and, 2082  
   regulation of flow of, 2075-2076  
   secretion of, 2075-2076  
   volume and electrolyte content of, 98e-4t  
 Bile acid(s), 1934-1935, 1934f, 1934t, 2076, 2758t  
 Bile acid diarrhea, 268, 1934-1935, 1935t  
 Bile acid malabsorption, 268, 272  
 Bile acid pool, 2076  
 Bile acid sequestrants  
   adverse effects of, 2415, 2448t, 2453  
   drug interactions of, 42t  
   for lipoprotein disorders, 2448t, 2449  
   for metabolic syndrome, 2453  
   for type 2 diabetes mellitus, 2415  
 Bile duct(s)  
   common, 2075  
   imaging of, 346e-1v, 1892, 1895f  
   obstruction of  
     ERCP in, 1885f, 1892  
     malignant, 1790  
     vitamin K deficiency in, 96e-8  
   resection, for cholangiocarcinoma, 553  
 Bile duct disease, **2083**  
   back pain in, 118  
   choledocholithiasis. *See* Choledocholithiasis  
   congenital anomalies, 2083  
   extrinsic compression, 2084  
   hemobilia, 2084  
   hepatobiliary parasitism, 2084  
   in HIV infection, 1258  
   primary sclerosing cholangitis. *See* Primary sclerosing cholangitis (PSC)  
   stones, 346e-1v, 1881, 1884f  
   strictures, 2084  
   trauma-related, 2084  
 Bile reflux gastropathy, surgery-related, 1926-1927  
 Bile salt excretory protein, 2004  
 Bile salt export pump, 2075  
 Biliary atresia, 2068, 2083  
 Biliary cirrhosis, **2060**  
   vs. autoimmune hepatitis, 2051  
   clinical features of, 284, 2061  
   coagulation disorders in, 739  
   diagnosis of, 284, 366e-3f, 1992t, 2061  
   diseases associated with, 545, 545t  
   epidemiology of, 2060  
   pathology of, 366e-3f, 2060-2061  
   pathophysiology of, 372e-24t  
   recurrence of, after liver transplantation, 2073-2074  
   secondary, choledocholithiasis and, 2084  
   skin manifestations of, 360, 360t, 365, 2061  
   treatment of, 2061  
 Biliary colic  
   abdominal pain in, 103, 106, 262  
   differential diagnosis of, 262  
   in gallbladder disease, 2079-2080  
   nausea and vomiting in, 258  
   treatment of, 263  
 Biliary dyskinesia, postcholecystectomy, 2082  
 Biliary ectasia, congenital, 2083  
 Biliary (hepatic) flukes  
   cholangiocarcinoma and, 552  
   clinical features of, 1428-1429  
   diagnosis of, 245e-2t, 245e-5t, 245e-6t, 1429, 2084  
   geographic distribution of, 1423t  
   life cycle hosts of, 245e-2t  
   transmission of, 1423t  
   treatment of, 1428t, 1429  
 Biliary hypoplasia, 2083  
 Biliary sludge, 2077-2078  
 Biliopancreatic diversion, 2398, 2398f  
 Biliprotein, 280  
 Bilirubin. *See also* Jaundice  
   biliary excretion of, 2000  
   conjugated, 280, 1998t, 1999-2000, 2000f  
   delta fraction, 280  
   extrahepatic disposition of, 2000  
   in gut, 2000  
   hepatocellular transport of, 1999-2000, 1999f  
   metabolism of, 280, 1999-2000  
   production of, 280, 2000  
   renal excretion of, 2000  
   serum, 280  
   elevation of. *See* Hyperbilirubinemia  
   in liver function evaluation, 283, 1995-1996, 1996f, 1998t  
   measurement of, 280  
   normal value, 280  
   unconjugated, 280, 1996  
   urine, 280, 1996, 1998t, 2000  
 Bilirubinuria, 279  
 Biliverdin, 280  
 Biliverdin reductase, 280  
 Bill & Melinda Gates Foundation, 8  
 Billowing mitral leaflet syndrome. *See* Mitral valve prolapse  
 Billroth procedures, 1925-1926, 1925f  
 Binet staging system, for lymphoid malignancies, 700t  
 Binge-eating disorder, **2720**  
 Binswanger's disease (diffuse white matter disease), 163, 2568, 2602  
 Bioavailability, 33-34, 33f  
 Biocompatibility, 1822  
 Biodegradable vascular scaffold (BVS) stent, 296e-2  
 Biodosimetry Assessment Tool, 263e-7  
 Biofeedback training, 274, 2590  
 Biofilm, 145e-4, 166e-1  
 Bioinformatics, 425  
 Biolimus, 296e-2  
 Biologic signal, 150e-1  
 Biologic systems, 87e-1-2, 87e-2f. *See also* Systems biology  
 Biologic therapy. *See also* Gene therapy  
   cancer. *See* Cancer biologic therapy  
   for IBD, 1961-1962  
   for rheumatoid arthritis, 2145, 2146-2147t, 2147  
 Biomass smoke-induced illness, 1693-1694, 1694f  
 Biomedical Advanced Research and Development Authority (BARDA), 261e-10  
 Bioprinting, 92e-2, 92e-3v  
 Bioprosthetic heart valve. *See* Prosthetic heart valve  
 Biopsy. *See also specific types and sites*  
   in cancer diagnosis, 103e-1-2, 103e-1t, 468  
   core-needle, 103e-2  
   excisional, 103e-2  
   fine-needle aspiration, 103e-2  
   incisional, 103e-2  
   specimen collection and transport, 150e-5t  
 Bioterrorism, **261e-1**  
   Category A agents, 261e-1, 261e-1t, 261e-2  
   Category B agents, 261e-1, 261e-1t, 261e-9  
   Category C agents, 261e-1, 261e-1t, 261e-9  
   exposure in war veterans, 152e-8  
   features of effective agents, 261e-1, 261e-7t  
   preparedness for, 918  
   prevention of and preparedness for, 261e-9-10  
   weaponization of agents, 261e-1  
 Biotin, 95e-2t, 96e-5, 98e-5t  
 Bipolar cell antibodies, 614t  
 Bipolar disorder, 2717, 2717t, 2718t  
 Bipolar II disorder, 2717  
*Bipolaris* spp., 228, 491  
 Birbeck granules, 135e-6  
 Bird fancier's lung, 1681, 1681t, 1682  
 Birth weight, low, 333e-1  
 Bisacodyl, 62t, 274  
 Bischloromethyl ether, 506  
 Bismuth-containing preparations, 1920t, 1921, 1923  
 Bismuth poisoning, 240t  
 Bismuth subsalicylate  
   adverse effects of, 268, 379, 1921  
   for diarrhea, 268  
   in *H. pylori* eradication, 263, 1042t, 1922t, 1923  
   for microscopic colitis, 270  
   for travelers' diarrhea, 797, 857t  
   for travelers' diarrhea prophylaxis, 268, 857  
 Bisoprolol, 1512t, 1589t  
 2,3-Bisphosphoglycerate, 632  
 Bisphosphonates  
   action of, 102e-11, 2501  
   adverse effects of  
     actinomycotic osteomyelitis, 1088, 1089f  
     atypical femur fracture, 2501, 2501f  
     osteonecrosis of jaw, 242, 623, 717, 2218t, 2501