

- Channel proteins, 9  
 Channelopathies, and sudden cardiac death, 551  
 Chaperone molecules, 12  
 Charcot-Bouchard microaneurysms, 1268  
 Charcot-Leyden crystals, 682b  
 Charcot-Marie-Tooth (CMT) disease, 1234  
   morphology of, 1231b  
*CHEK2*, and breast cancer, 1054, 1054t  
 Chemical agents  
   cell injury due to, 39  
   toxicity of, 406-407  
 Chemical carcinogenesis, 322, 322f, 323t, 324b  
   molecular targets of, 323-324  
   promotion of, 324  
 Chemical injury, inflammation due to, 72  
 Chemokines  
   in glomerular injury, 907  
   in inflammation, 76, 87-88  
 Chemotaxis, of leukocytes, 77-78  
 Cherry-red spot, in Tay-Sachs disease, 151b  
 Chiari type I malformation, 1258  
 Chiari type II malformation, 1258, 1258f  
 Chickenpox, 358-359, 358b-359b, 358f  
 Children  
   causes of death in, 451, 452t  
   congenital anomalies in, 452-456  
   causes of, 454-456, 454t  
   pathogenesis of, 455-456, 455f  
   deaths in, in Global Burden of Disease, 405  
   diseases of, 451-482  
   inborn errors of metabolism in, 464-471  
   tumors and tumor-like lesions in, 473-481  
     benign, 473-475, 474f  
     malignant, 475-481, 475t  
 Childs-Pugh classification of cirrhosis, 827  
*Chlamydia trachomatis*, 351t, 383, 994  
   in conjunctival scarring, 1323  
 Chlamydial infections, 383-384, 384b  
 Chloracne, 414  
 Chloroform, occupational health risks, 413  
 Chloroquine, 1240  
 Chokes, the, 128  
 Cholangiocarcinoma, 871t, 874, 874f  
   extrahepatic, 874b  
   morphology of, 874b  
 Cholecalciferol, 438  
 Cholecystitis, 877-879  
 Choledochal cysts, 861  
   in gallbladder, 875  
 Cholelithiasis, 875-877  
   obesity and, 448  
 Cholestasis, 853-854, 855f, 860b-861b  
   morphology of, 854b  
   of sepsis, 854-855  
 Cholesteatomas, 740  
 Cholesterol  
   intracellular accumulation of, 62  
   metabolism and transport of, 147-149  
 Cholesterol emboli, 127  
 Cholesterol esters, intracellular  
   accumulation of, 62  
 Cholesterol stones, 876t, 877b, 877f  
 Cholesterosis, 62, 62f  
 Chondroblastic osteosarcoma, 1199b  
 Chorioamnionitis, 456  
 Choriocarcinoma  
   gestational disorders, 1041, 1041b, 1041f  
   ovarian, 1031  
   testicular, 978, 978b, 978f  
 Choristoma, 267  
 Choroid, 1320f  
 Choroid plexus carcinomas, 1311  
 Choroid plexus papillomas, 1311  
 Choroidal neovascularization, 1338  
 Christmas disease, 663  
 Chromaffin, in adrenal medulla, 1133-1134, 1134b-1135b  
 Chromatin, 3  
 Chromatin condensation, in apoptosis, 53b, 54f  
 Chromatin organizing factors, 4  
 Chromium, as carcinogen, 278t  
 Chromophobe renal carcinoma, 954, 954b-955b  
 Chromosomal disorder(s), 158-167  
   chromosome 22q11.2 deletion syndrome as, 163-164  
   fetal growth restriction due to, 457  
   hermaphroditism and  
     pseudohermaphroditism as, 167  
   involving autosomes, 161-164, 164b  
   Klinefelter syndrome, 165-166  
   normal karyotype and, 158-159  
   prevalence of, 454  
   trisomy 21 (Down syndrome) as, 161-163  
   Turner syndrome, 166-167, 167f  
 Chromosomal rearrangements, 160f  
 Chromosome 22q11.2 deletion syndrome, 163-164  
 Chromosomes, structural abnormalities of, 159-161  
 Chromothripsis, in cancer, 318-319  
 Chronic antibody-mediated rejection, 233  
 Chronic bronchitis, 674t, 677t, 678-679, 679b  
 Chronic cholecystitis, 878-879, 879f  
   morphology of, 878b-879b  
 Chronic diffuse interstitial (restrictive) diseases, 684-697, 685t, 687b  
 Chronic disease, anemia of, 652-653, 655b  
 Chronic granulomatous disease, 238  
 Chronic GVHD, 236  
 Chronic hepatitis, 836, 838f  
 Chronic illness, and malnutrition, 433  
 Chronic inflammation, 71, 93-98, 98b-99b  
   features of, 71t  
 Chronic inflammatory demyelinating poly(radiculo)neuropathy, 1231, 1231f  
 Chronic kidney disease, 898, 899t  
 Chronic liver failure, 827-828  
 Chronic lymphocytic leukemia (CLL), 591t, 593-594, 593f, 594f, 598b  
   morphology of, 593b  
 Chronic myelogenous leukemia (CML), 616-618, 617f  
   morphology of, 617b  
   pathogenesis of, 617f  
 Chronic myeloproliferative disorders, 586  
 Chronic neuronal injury, 1252b-1253b  
 Chronic nonspecific lymphadenitis, 585  
 Chronic obstructive pulmonary disease (COPD), 675, 675f  
 Chronic pancreatic injury, 888  
 Chronic pelvic pain syndrome, 962-963  
 Chronic rejection, 233b-234b  
 Chronic renal failure, anemia due to, 655  
 Chronic tophaceous arthritis, 1216, 1216b  
 Chronic traumatic encephalopathy (CTE), 1263  
 Chronic viral hepatitis, 837b-838b, 838f  
   cirrhosis from, 827f  
 Churg-Strauss syndrome, 511  
 Chvostek sign, in hypoparathyroidism, 1104-1105  
 Chylocele, 980  
 Chylothorax, 722  
 Cigarette smoke, as teratogen, 454-455  
 Cigarette smoking  
   and atherosclerosis, 493  
   and bladder cancer, 964  
   and cancer, 276-277  
   and pancreatic carcinoma, 893, 895b  
 Ciliary body, 1320f  
 Ciliochoroidal effusion, 1342  
 Circulating proteins, 72  
 Cirrhosis, 827-828, 828f  
   by chronic liver diseases, 849  
   from chronic viral hepatitis, 827f  
   hepatitis C-related, 827f  
   morphology of, 827b-828b  
 Citrullinated peptides (CCPs), 1210  
 Civatte bodies, 1167b  
 Class switching, 587  
 Classic KS, 518, 518b-519b  
 Classical pathway, 88  
 Clathrin, 9  
 Clathrin-coated pit, 9-10  
 CLC1, mutations of, 1246  
 Clear cell carcinoma  
   in kidney, 953, 954b-955b, 954f  
   of ovaries, 1028  
 Clear cell chondrosarcoma, 1202b  
 Cleft lip, 453f  
 Cleft palate, 453f  
 Cleidocranial dysplasia, 1184, 1184t  
 Climate change, health effects of, 405-406, 405f  
 Clonal evolution model, of metastasis, 309  
 Clonal selection, 190  
 Close-up, of cortical surface in benign nephrosclerosis, 939f  
 Clostridial cellulitis, 383b  
 Clostridial infections, 382-383, 383b  
*Clostridium perfringens*, 382-383, 383f  
 Clotting, in inflammation, 89  
 Clotting factor, abnormalities in, 661-663, 661f  
 CNS. *See* Central nervous system (CNS).  
 Coagulation  
   disseminated intravascular, 127, 663-665  
   in septic shock, 133  
   in inflammation, 89  
 Coagulation cascade, in hemostasis, 118-120, 118f, 119f  
 Coagulation system, in glomerular injury, 907-908  
 Coagulative necrosis, 43b-44b, 43f  
 Coagulopathy, consumptive, 127  
 Coal dust  
   intracellular accumulation of, 64  
   lung diseases due to, 688t  
   pneumoconioses due to, 414  
 Coal workers' pneumoconiosis, 64, 689-690, 689b, 689f  
 Coarctation of the aorta, 537, 537f  
 Coated pits, 9-10  
 Cocaine, abuse of, 423-424, 423f  
*Coccidioides immitis*, 710-711  
 Co-deletion, in oligodendroglioma, 1310  
 Codominance, 140  
 Cofactor, 119  
 Cognitive impairment, in Alzheimer disease, 1290  
 Co-infection, in HDV, 835  
 COL7A1 gene, in epidermolysis bullosa, 1171  
 Cold agglutinin type immunohemolytic anemia, 643t, 644  
 Cold hemolysin type immunohemolytic anemia, 643t, 644  
 Cold sores, 357b-358b  
 Collagen biosynthetic pathway, 23f