List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Lip, oral cavity, and pharynx		
Lip		Hydrochlorothiazide Solar radiation
Oral cavity	Alcoholic beverages Betel quid with tobacco Betel quid without tobacco Human papillomavirus type 16 Tobacco, smokeless Tobacco smoking	Human papillomavirus type 18
Salivary gland	X-radiation, gamma-radiation	Radioiodines, including Iodine-131
Tonsil	Human papillomavirus type 16	
Pharynx	Alcoholic beverages Betel quid with tobacco Human papillomavirus type 16 Tobacco smoking	Asbestos (all forms) Printing processes Tobacco smoke, secondhand
Nasopharynx	Epstein-Barr virus Formaldehyde Salted fish, Chinese-style Tobacco smoking Wood dust	
Digestive tract, upper	Acetaldehyde associated with consumption of alcoholic beverages	
Digestive organs		
Oesophagus	Acetaldehyde associated with consumption of alcoholic beverages Alcoholic beverages Betel quid with tobacco Betel quid without tobacco Tobacco, smokeless Tobacco smoking X-radiation, gamma-radiation	Dry cleaning Pickled vegetables (traditional Asian) Rubber production industry Very hot beverages (squamous cell carcinoma)

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Stomach	*Helicobacter pylori* Rubber production industry Tobacco smoking X-radiation, gamma-radiation	Asbestos (all forms) Epstein-Barr virus Lead compounds, inorganic Nitrate or nitrite (ingested) under conditions that result in endogenous nitrosation Pickled vegetables (traditional Asian) Salted fish, Chinese-style Processed meat (consumption of)
Colon and rectum	Alcoholic beverages Tobacco smoking X-radiation, gamma-radiation Processed meat (consumption of)	Asbestos (all forms) *Schistosoma japonicum* Red meat (consumption of)
Anus	Human immunodeficiency virus type 1 Human papillomavirus type 16	Human papillomavirus types 18, 33
Liver and bile duct	Aflatoxins Alcoholic beverages *Clonorchis sinensis* 1,2-Dichloropropane Estrogen-progestogen contraceptives Hepatitis B virus Hepatitis C virus *Opisthorchis viverrini* Plutonium Thorium-232 and its decay products Tobacco smoking (in smokers and in smokers' children) Vinyl chloride	Androgenic (anabolic) steroids Arsenic and inorganic arsenic compounds Betel quid without tobacco DDT Dichloromethane (Methylene chloride) Human immunodeficiency virus type 1 *Schistosoma japonicum* Trichloroethylene X-radiation, gamma-radiation
Gall bladder	Thorium-232 and its decay products	
Pancreas	Tobacco, smokeless Tobacco smoking	Alcoholic beverages Thorium-232 and its decay products X-radiation, gamma-radiation Red meat (consumption of)

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Digestive tract, unspecified		Radioiodines, including Iodine-131
Respiratory organs		
Nasal cavity and paranasal sinus	Isopropyl alcohol production Leather dust Nickel compounds Radium-226 and its decay products Radium-228 and its decay products Tobacco smoking Wood dust	Carpentry and joinery Chromium(VI) compounds Formaldehyde Textile manufacturing
Larynx	Acid mists, strong inorganic Alcoholic beverages Asbestos (all forms) Tobacco smoking	Human papillomavirus type 16 Rubber production industry Sulfur mustard Tobacco smoke, secondhand

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Lung	Acheson process, occupational exposures associated with Aluminum production Arsenic and inorganic arsenic compounds Asbestos (all forms) Beryllium and beryllium compounds Bis(chloromethyl)ether; chloromethyl methyl ether (technical grade) Cadmium and cadmium compounds Chromium(VI) compounds Coal, indoor emissions from household combustion Coal gasification Coal-tar pitch Coke production Engine exhaust, diesel Hematite mining (underground) Iron and steel founding MOPP (vincristine-prednisone-nitrogen mustard-procarbazine mixture) Nickel compounds Outdoor air pollution Painting Particulate matter in outdoor air pollution Plutonium Radon-222 and its decay products Rubber production industry Silica dust, crystalline Soot Sulfur mustard Tobacco smoke, secondhand Tobacco smoking Welding fumes X-radiation, gamma-radiation	Acid mists, strong inorganic Art glass, glass containers and pressed ware (manufacture of) Biomass fuel (primarily wood), indoor emissions from household combustion of Bitumens, occupational exposure to oxidized bitumens and their emissions during roofing Bitumens, occupational exposure to hard bitumens and their emissions during mastic asphalt work Carbon electrode manufacture *alpha*-Chlorinated toluenes and benzoyl chloride (combined exposures) Cobalt metal with tungsten carbide Creosotes Diazinon Fibrous silicon carbide Frying, emissions from high-temperature Hydrazine Insecticides, non-arsenical, occupational exposures in spraying and application Printing processes 2,3,7,8-Tetrachlorodibenzo-*para*-dioxin

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Bone, skin, and mesothelium, endothelium, and soft tissue		
Bone	Plutonium Radium-224 and its decay products Radium-226 and its decay products Radium-228 and its decay products X-radiation, gamma-radiation	Radioiodines, including Iodine-131
Skin (melanoma)	Solar radiation Ultraviolet-emitting tanning devices Polychlorinated biphenyls	
Skin (other malignant neoplasms)	Arsenic and inorganic arsenic compounds Azathioprine Coal-tar distillation Coal-tar pitch Cyclosporine Methoxsalen plus ultraviolet A Mineral oils, untreated or mildly treated Shale oils Solar radiation Soot X-radiation, gamma-radiation	Creosotes Human immunodeficiency virus type 1 Human papillomavirus types 5 and 8 (in patients with *epidermodysplasia verruciformis*) Hydrochlorothiazide Nitrogen mustard Petroleum refining, occupational exposures Ultraviolet-emitting tanning devices Merkel cell polyomavirus (MCV)
Mesothelium (pleura and peritoneum)	Asbestos (all forms) Erionite Fluoro-edenite Painting	
Endothelium (Kaposi sarcoma)	Human immunodeficiency virus type 1 Kaposi sarcoma herpes virus	
Soft tissue		Polychlorophenols or their sodium salts (combined exposures) Radioiodines, including iodine-131 2,3,7,8-Tetrachlorodibenzo-*para*-dioxin

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Breast and female genital organs		
Breast	Alcoholic beverages Diethylstilbestrol Estrogen-progestogen contraceptives Estrogen-progestogen menopausal therapy X-radiation, gamma-radiation	Dieldrin Digoxin Estrogen menopausal therapy Ethylene oxide Polychlorinated biphenyls Shiftwork that involves circadian disruption Tobacco smoking
Vulva	Human papillomavirus type 16	Human immunodeficiency virus type 1 Human papillomavirus types 18, 33
Vagina	Diethylstilbestrol (exposure in utero) Human papillomavirus type 16	Human immunodeficiency virus type 1
Uterine cervix	Diethylstilbestrol (exposure in utero) Estrogen-progestogen contraceptives Human immunodeficiency virus type 1 Human papillomavirus types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 Tobacco smoking	Human papillomavirus types 26, 53, 66, 67, 68, 70, 73, 82
Endometrium	Estrogen menopausal therapy Estrogen-progestogen menopausal therapy Tamoxifen	Diethylstilbestrol
Ovary	Asbestos (all forms) Estrogen menopausal therapy Tobacco smoking	Talc-based body powder (perineal use) X-radiation, gamma-radiation

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Male genital organs		
Penis	Human papillomavirus type 16	Human immunodeficiency virus type 1 Human papillomavirus type 18
Prostate		Androgenic (anabolic) steroids Arsenic and inorganic arsenic compounds Cadmium and cadmium compounds Malathion Rubber production industry Thorium-232 and its decay products X-radiation, gamma-radiation Red meat (consumption of)
Testis		DDT Diethylstilbestrol (exposure in utero) N,N-dimethylformamide Perfluorooctanoic acid

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Urinary tract		
Kidney	Tobacco smoking X-radiation, gamma-radiation Trichloroethylene	Arsenic and inorganic arsenic compounds Cadmium and cadmium compounds Perfluorooctanoic acid Printing processes Welding fumes
Renal pelvis and ureter	Aristolochic acid, plants containing Phenacetin Phenacetin, analgesic mixtures containing Tobacco smoking	Aristolochic acid
Urinary bladder	Aluminum production 4-Aminobiphenyl Arsenic and inorganic arsenic compounds Auramine production Benzidine Chlornaphazine Cyclophosphamide Magenta production 2-Naphthylamine Painting Rubber production industry *Schistosoma haematobium* Tobacco smoking *ortho*-Toluidine X-radiation, gamma-radiation	4-Chloro-*ortho*-toluidine Coal-tar pitch Dry cleaning Engine exhaust, diesel Hairdressers and barbers, occupational exposure 2-mercaptobenzothiazole Pioglitazone Printing processes Soot Textile manufacturing Tetrachloroethylene
Eye, brain, and central nervous system		
Eye	Human immunodeficiency virus type 1 Ultraviolet-emitting tanning devices Ultraviolet emissions from welding	Solar radiation
Brain and central nervous system	X-radiation, gamma-radiation	Radiofrequency electromagnetic fields (including from wireless phones)

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Endocrine glands		
Thyroid	Radioiodines, including Iodine-131 X-radiation, gamma-radiation	

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Lymphoid, hematopoietic, and related tissue		

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Leukaemia and/or lymphoma	Azathioprine Benzene Busulfan 1,3-Butadiene Chlorambucil Cyclophosphamide Cyclosporine Epstein-Barr virus Etoposide with cisplatin and bleomycin Fission products, including Strontium-90 Formaldehyde *Helicobacter pylori* Hepatitis C virus Human immunodeficiency virus type 1 Human T-cell lymphotropic virus type 1 Kaposi sarcoma herpes virus Lindane Melphalan MOPP (vincristine-prednisone-nitrogen mustard-procarbazine mixture) Pentachlorophenol Phosphorus-32 Rubber production industry Semustine (methyl-CCNU) Thiotepa Thorium-232 and its decay products Tobacco smoking Treosulfan X-radiation, gamma-radiation	Bischloroethyl nitrosourea (BCNU) Chloramphenicol DDT Diazinon Dichloromethane (Methylene chloride) Ethylene oxide Etoposide Glyphosate Hepatitis B virus Magnetic fields, extremely low frequency (childhood leukaemia) Malathion Mitoxantrone Nitrogen mustard Painting (childhood leukaemia from maternal exposure) Petroleum refining, occupational exposures Polychlorinated biphenyls Polychlorophenols or their sodium salts (combined exposures) Radioiodines, including Iodine-131 Radon-222 and its decay products Styrene Teniposide Trichloroethylene 2,3,7,8-Tetrachlorodibenzo-*para*-dioxin Tobacco smoking (childhood leukaemia in smokers' children) Malaria (caused by infection with *Plasmodium falciparum* in holoendemic areas)

List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 118*		
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Multiple or unspecified sites		
Multiple sites (unspecified)	Cyclosporine Fission products, including strontium-90 X-radiation, gamma-radiation (exposure in utero)	Chlorophenoxy herbicides Plutonium
All cancer sites (combined)	2,3,7,8-Tetrachlorodibenzo-*para*-dioxin	

* This table does not include factors not covered in the IARC Monographs, notably genetic traits, reproductive status, and some nutritional factors.

Adapted from Table 4 in Cogliano *et al.* (2011) available at: http://jnci.oxfordjournals.org/content/early/2011/12/11/jnci.djr483.short?rss=1

Last update: 13 April 2017