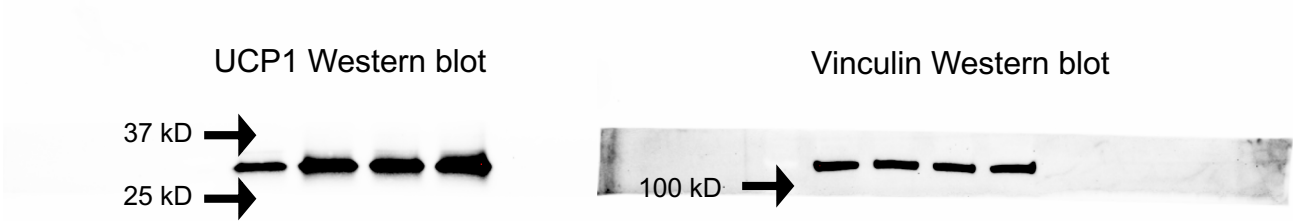

Supplementary information

**Artificial intelligence-enabled clinical
phenotyping of human brown fat**

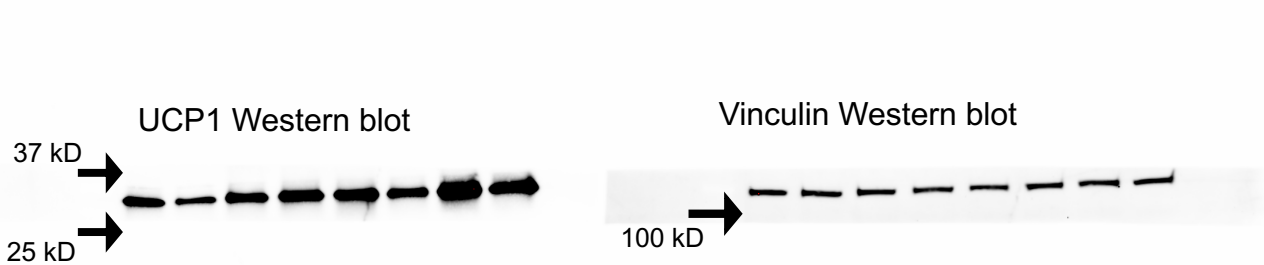
In the format provided by the
authors and unedited

Supplementary Figure 1. Uncropped Western Blots

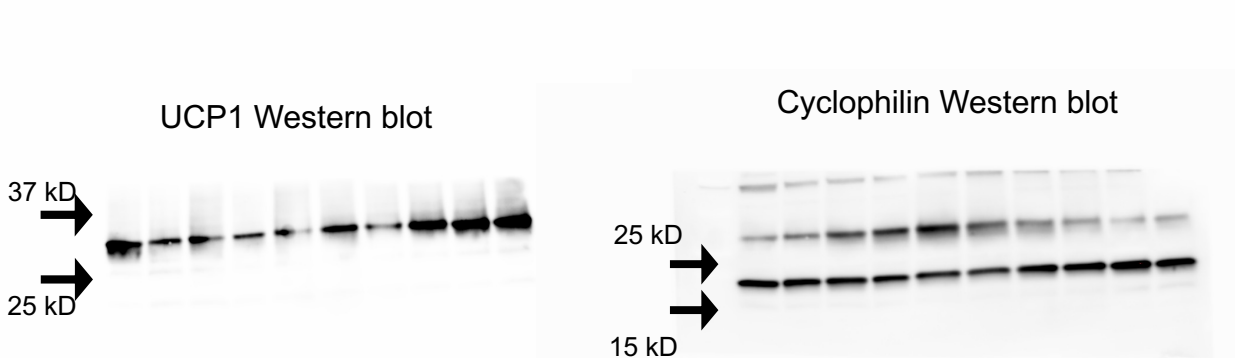
Uncropped gels Figure 4d.



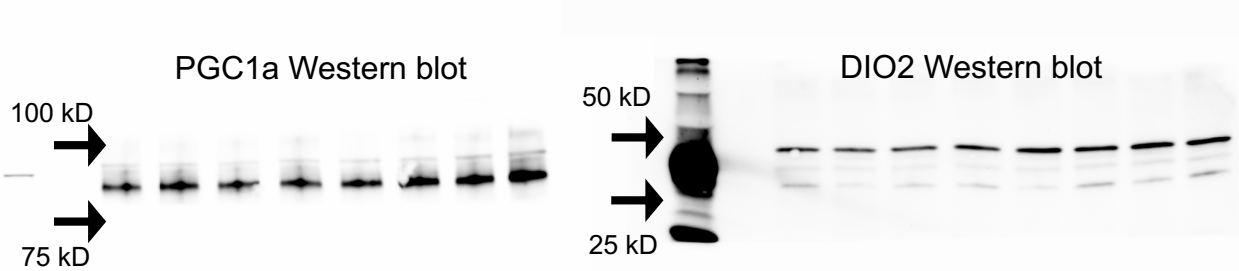
Uncropped gels Extended Data Figure 7d

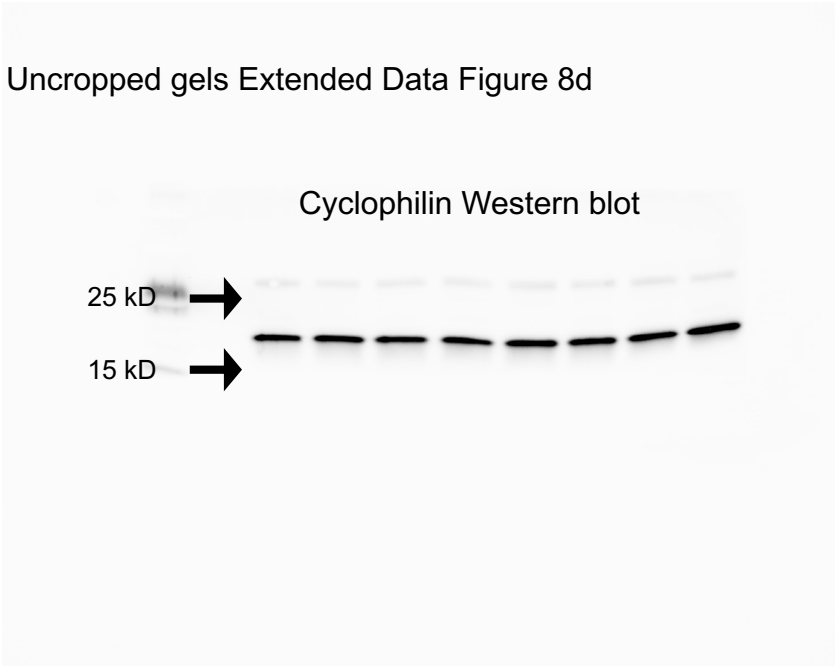


Uncropped gels Extended Data Figure 8c

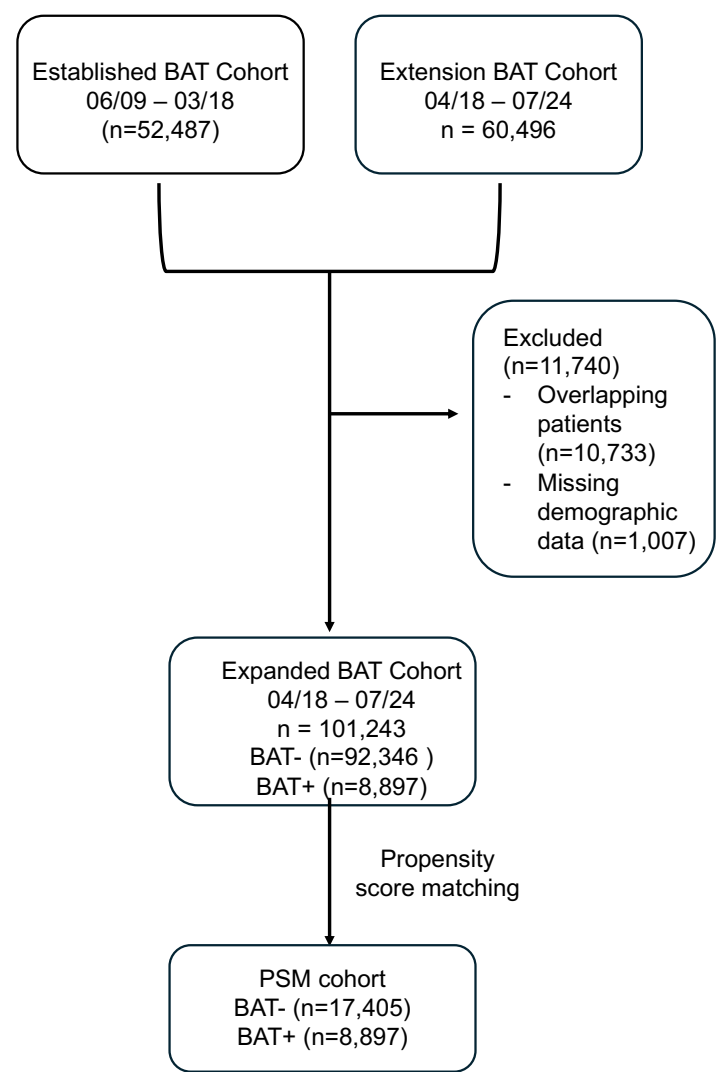


Uncropped gels Extended Data Figure 8d





Supplementary Figure 2. Consort diagram of the study population including exclusion criteria.



Supplementary Table 1. Cancer sites and corresponding ICD-0 codes.

Cancer site	ICD-0 code
Bones, joints and/or cartilage	C40 – C41
Breast and/or female genitalia	C50 – C58
Digestive	C15 – C26
Eye, brain and/or central nervous system	C69 – C72
Hematopoietic and/or reticuloendothelial	C42
Lip, oral and/or pharynx	C00 – C14
Male genitalia	C60 – C63
Peripheral autonomic nervous system, and/or retroperitoneal and peritoneal tissues	C47 – C49
Intrathoracic and/or respiratory	C30 – C39
Skin	C44
Thyroid and/or other endocrine cancer	C73 – C75
Urinary	C64 – C68
Other and ill-defined sites; lymph nodes; unknown primary site	C76 – C77; C80
Unknown site	NA

Supplementary Table 2. Cancer therapy categories.

Cancer therapy category	Medication/compound
Immunomodulatory therapy	Ipilimumab, Atezolizumab, Avelumab, Durvalumab, Nivolumab, Pembrolizumab, Interferon Alfa-2b, Sipuleucel-T, Siltuximab, Hyaluronidase-Rituximab, Obinutuzumab, Ofatumumab, Tositumomab, Brentuximab Vedotin, Daratumumab, Alemtuzumab, Aldesleukin, Lenalidomide, Pomalidomide, Temsirolimus, Everolimus, Rituximab, Daratumumab-Hyaluronidase, Dostarlimab, Cemiplimab, Tebentafusp, Talquetamab, Retifanlimab, Zimberelimab (Ab122), Nivolumab-Relatlimab, Domvanalimab (Ab154), Spartalizumab (Pdr001), Monalizumab (lph2201), Cetrelimab (Jnj-63723283), Glofitamab, Lacutamab (lph4102), Nivatrotamab (Hu3f8-Bsab), Tarlatamab, Tislelizumab (Bgb-A317/Vdt482)
Mitotic inhibitor	Cabazitaxel, Docetaxel, Eribulin, Etoposide, Etoposide Phosphate, Ixabepilone, Paclitaxel, Paclitaxel Protein-Bound, Vinblastine, Vincristine, Vinorelbine, Abemaciclib, Palbociclib, Ribociclib, Vincristine Liposome, Evexomostat (Sdx-7320), Indibulin
Targeted therapy	Bortezomib, Carfilzomib, Ixazomib, Bevacizumab, Pazopanib, Ramucirumab, Ziv-Aflibercept (Vegf Trap), Cetuximab, Erlotinib, Gefitinib, Necitumumab, Osimertinib, Panitumumab, Dacomitinib, Lapatinib, Neratinib, Vismodegib, Ado-Trastuzumab Emtansine, Pertuzumab, Trastuzumab, Belinostat, Panobinostat, Romidepsin, Vorinostat, Niraparib, Olaparib, Rucaparib, Talazoparib, Amivantamab, Fam-Trastuzumab Deruxtecan, Hyaluronidase-Trastuzumab, Adagrasib, Adavosertib (Azd1775), Sacituzumab Govitecan, Hyaluronidase/Pertuzumab/Trastuzumab, Enfortumab Vedotin, Polatuzumab Vedotin, Mosunetuzumab, Epcoritamab, Cibisatamab (Ro6958688), Naxitamab, Zotatifin (Eft226), Sotorasib, Revumenib (Sndx-5613), Olomorasib (Ly3537982), Inavolisib (Gdc-0077), Tiragolumab (Ro7092284/Mtig7192a), Tisotumab Vedotin, Patritumab Deruxtecan (U3-1402), Quemliclustat (Ab680), Zandelisib (Me-401), Magrolimab (Gs-4721/Hu5f9-G4), Camonsertib (Rp-3500), Prexasertib (Acr-368), Azenosertib (Zn-C3), Mirvetuximab Soravtansine, Ceralasertib (Azd6738), Emactuzumab (Ro5509554), Ozurifamab Vedotin (Ba3021), Xevinapant (Debio 1143), Zilovertamab Vedotin (Vls-101/Mk-2140), Brigimadlin (Bi 907828), Figitumumab (Cp-751,871), Obatoclax Mesylate (Gx15-070ms), Tarextumab (Omp-59r5), Tigatuzumab (Cs-1008), Datopotamab Deruxtecan (Ds-1062a), Runimotamab (Btrc4017a), Elimusertib (Bay 1895344), Gemtuzumab Ozogamicin, Narsoplimab (Oms721), Peposertib (M3814/Msc2490484a).
Kinase inhibitor	Alpelisib, Duvelisib, Idelalisib, Bosutinib, Dasatinib, Imatinib, Nilotinib, Ibrutinib, Afatinib, Alectinib, Binimetinib, Brigatinib, Ceritinib, Cobimetinib, Crizotinib, Dabrafenib, Encorafenib, Entrectinib, Larotrectinib, Lorlatinib, Midostaurin, Pexidartinib, Ruxolitinib, Trametinib, Vemurafenib, Ponatinib, Vandetanib, Axitinib, Cabozantinib, Lenvatinib, Regorafenib, Sorafenib, Sunitinib, Asciminib, Zanubrutinib, Selpercatinib, Tucatinib, Cerdulatinib (Prt062070), Capmatinib, Copanlisib, Repotrectinib, Mirdametinib (Pd-0325901), Avapritinib, Pirtobrutinib, Quizartinib, Cediranib (Azd2171), Gilteritinib, Defactinib (Vs-6063), Pemigatinib, Lazertinib, Lucitanib, Lunresertib (Rp-6306), Ripretinib, Tirabrutinib, Pacritinib, Selitrectinib (Bay 2731954/Loxo-195), Avutometinib (Vs-6766/Ro5126766), Erdafitinib, Pralsetinib, Vimseltinib (Dcc-3014), Vorasidenib (Ag-881).
Hormonal therapy	Estramustine, Apalutamide, Bicalutamide, Enzalutamide, Flutamide, Nilutamide, Anastrozole, Exemestane, Letrozole, Fulvestrant, Degarelix, Raloxifene, Tamoxifen, Goserelin, Leuprolide, Megestrol, Triptorelin, Bexarotene, Imlunestrant (Ly3484356).
Alkylating agent	Bendamustine, Busulfan, Carboplatin, Carmustine, Chlorambucil, Cisplatin, Cyclophosphamide, Dacarbazine, Ifosfamide, Lomustine, Mechlorethamine, Melphalan, Oxaliplatin, Temozolomide, Thiotepe, Trabectedin, Methotrexate.
Antimetabolite	Capecitabine, Cladribine, Clofarabine, Cytarabine, Cytarabine Liposomal, Decitabine, Floxuridine, Fludarabine, Fluorouracil, Gemcitabine, Hydroxyurea, Mercaptopurine, Nelarabine, Pemetrexed, Pralatrexate, Thioguanine, Telaglenastat (Cb-839), Valemetostat (Ds-3201b), Pegargiminase (Adi-Peg 20), Niogacestat, Devimistat (Cpi-613), Cedazuridine-Decitabine.
Cancer antibiotic	Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Doxorubicin Liposomal, Epirubicin, Idarubicin, Mitomycin, Mitoxantrone, Pentostatin.
Other/Experimental	Thalidomide, Ags-8m4, Azd0530, Azd4877, Bms-641988, Brivanib, Cnf 2024 (Biib021, Cf1983), Kw-2450, Mdx-1401, Mdx-1411, Montanide, Navitoclax (Abt-263), Npi-0052, Psma Dna Vaccine, Qs-Dg, R1507 (Cho), Ramucirumab, S-1, Salirasib, Sb-743921, Sch 717454, Sgn-40, Sialyl Lewis-Xlh + Qs-21, Tanesprimycin (17-Aag, Kos-953), Tesevatinib (XI647), XI281, XI844, Adct-301, Adi-Peg 20, Ags-16m8f, AI101 (Bms-906024), Alisertib (Mln8237), Asg-5me, Auy922, Azd1775, Azd7762, Azd8055, Bcl201, Belantamab Mafodotin (Gsk2857916), Bind-014 (Docetaxel Nanoparticles), Brilanestrant (Gdc-0810, Arn-810), Btct4465a, Buparlisib (Bkm120), Capivasertib (Azd5363), Carboxyamidotriazole Orotate (Cto), Cb-839, Cbp501, Cd20 Dna Vaccine, Cdx-1401, Ciforadenant (Cpi-444), Cixutumumab (Imc-A12), Clostridium Novyi-Nt, Co-1686 Hbr, Cpi-0610, Crenolanib, Dalantercept, Debio 1347 (Ch5183284), Denintuzumab (Sgn-Cd19a), Diye5953a, Dn24-02, Dstp3086s, Ec1169, Entinostat (Sndx-275), Epacadostat (Incb024360), Farletuzumab (Morab-003), Fimepinostat (Cudc-907), Flavopiridol (Alvocidib), Galinpepimut-S, Ganetespib (Sta-9090), Gd2l-Klh + Gd3l-Klh, Gdc-0927, Gi-4014, Gi-4015, GI-Onc1, Globo-H-Gm2-Stn-Tf-Tn-Klh, Gsk2110183, Gsk2141795, Guadecitabine (Sgi-110), Gwn323, Hdm201, He3235, Her2/Neu Dna Vaccine, Hu3f8, Imcgp100, Imgn529, Infigratinib (Bgj398), Iniparib (Bsi-201), Iso-Fludelone, Itacitinib Sr (Incb039110), Lde225, Lirilumab (Bms-986015), Lor-253, Lsz102, Lurbinedectin (Pm01183), Ly2875358, Ly3022855 (Imc-Cs4), Ly3023414, Ly3500518 (Am0010), Me-401, Medi-3617, Mifamurtide (L-Mtp-Pe), Milademetan (Ds-3032b), Mk-1775, Mk-2206, Mk-4166, Mk-4827, Mk-8033,

	Mocetinostat (Mgcd0103), Morab-004, Motolimod (Vtx-2337), Ny-Eso-1 Olp4 Vaccine, Ogx-427, Omp-59r5 (Tarextumab), Opt-821, Patupilone (Epo906), Pdr001, Pegph20, Perifosine, Pidilizumab (Ct-011), Pimasertib (Msc1936369b), Pingmutyr, Pki-587 (Pf-05212384), Poly-IcIc, Polyvalent Vaccine 10-099 + Opt-821, Prt062070, Ptc299, Pu-H71, Qax576, Relatlimab (Bms-986016/Anti-Lag-3), Resiquimod, Retaspimycin (Ipi-504), Rgx-104, Ro4929097, Ro5045337 (R7112), Rovalpituzumab (Sc16ld6.5), Rxdx-105, Sapacitabine, Sapanisertib (Mln0128, Tak228), Selumetinib (Azd6244), Seviteronel (Vt-464), Sgn-Cd19b, Sgn-Liv1a, Snx-5422, Tas3681, Taselisib (Gdc-0032), Tazemetostat (Epz-6438), Tepotinib (Msc2156119j), Tesetaxel, Th-302, Tipifarnib (R115777), Tivozanib (Av-951), Tk216, Tpiv200, Trc105, Tremelimumab, Trx518, Tti-621, Ulixertinib (Bvd-523), Urelumab (Bms-663513), Utomilumab (Pf-05082566), Vaccine 08-095 + Opt-821, Vak694, Varlilumab, Veledimex, Veliparib (Abt-888), Vosaroxin (Sns-595), Vs-5584, Cytarabine Liposomal-Daunorubicin Liposomal, Tipiracil-Trifluridine, Fluorouracil Topical, Mechlorethamine Topical, Isotretinoin, Abiraterone, Altretamine, Arsenic Trioxide, Asparaginase Erwinia Chrysanthemi, Azacitidine, Bcg, Blinatumomab, Elotuzumab, Enasidenib, Inotuzumab Ozogamicin, Irinotecan, Ivosidenib, Mitotane, Mogamulizumab, Olaratumab, Pegaspargase, Procarbazine, Selinexor, Talimogene Laherparepvec, Topotecan, Tretinoin, Venetoclax, A33 Moab, Abexinostat, Ad-Rts-Hil-12, Aflibercept Ophthalmic, Ag-270, Allo-647, Aln-Vsp02, Amg 160, Asp1650, Asp8273, Asparaginase Escherichia Coli, At7519m, Regn4018, Sodium Iodide I-131, Yttrium Y-90 Theraspheres, Yttrium Y-90 Microspheres, Zenocutuzumab (Mcla-128), Irinotecan Liposomal, Eculizumab, Emapalumab, Opt-821 (Qs-21), Sirolimus Protein-Bound, Cergutuzumab Amunaleukin (Ro6895882), Hpn328, Ds-7423, Dr-01, Ljm716, Nb003, Sodium Iodide I-131 Omburtamab 8h9, Dyp688, Globo-H-Gm2-Stn-Tf-Tn-Klh + Qs-21, Vlx1570, Avb-S6-500, Cc-94676, Gsk3326595, Igm-2323, Pt-112, Btx-A51, Ifinatamab Deruxtecán (Ds-7300a/Mk-2400), Lag525, Regn7075, Rmc-6236, Sodium Iodide I-131 Mibg, Ca-4948, Giredestrant (Gdc-9545), Humab5b1 (Mvt-5873), Lutetium Lu-177 Dotatate, Mcla-145, Nvl-655, Regn5093-M114, Rly-2608, TJ033721, Vs-6766, Beta-Glucan, Camidanlumab Tesirine (Adct-301), F-652, Ly2880070, Nivatrotamab (Hu3f8-Bsab), Radium Ra-223 Chloride, Yttrium Y-90 Ibritumomab Tiuxetan, Bempegaldesleukin (Nktr-214), Cc-90011, Cx-2009, Io102, Io103, Ipi-549, Jnj-78278343, Lcl161, Ng-350a, Nvl-520, Pf-06873600 Mr, Rly-5836, Rmc-5552, Sar439859, Seclidemstat (Sp-2577), Sodium Iodide I-131 8h9, Sodium Iodide I-131 Tositumomab, Stx-478, Telomelysin (Obp-301), Tetrathiomolybdate, Autogene Cevumeran, Avutometinib (Vs-6766/Ro5126766), Evorpaccept (Alx148), Gdc-0980, Hdm201 (New Variant 2), Incagn01876, Ipafricept (Omp-54f28), Letrozole-Ribociclib, Loxo-783, Nemvaleukin Alfa (Alks 4230), Osi-906, Radium Ra-223 Dichloride, Rmc-6291, Sar405838, Treosulfan, XI092, Bdtx-1535, Belzutifan, Bms-986218, D3I-001, Eras-601, Gsk525762, Iph6501, Mrt-2359, Peposertib (M3814/Msc2490484a), Psb202, Samarium Sm-153 Lixidronam, Sodium Iodide I-131 Apamistamab, Srf231.
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Supplementary Table 3. 511 diagnostic codes analyzed with univariable logistic regression analysis for associations with BAT.

ICD code	System	Diagnosis	OR	95% CI	Unadjusted P value*	FDR-Adjusted P value†
E11	Endocrine and metabolic	Non-insulin dependent diabetes mellitus	0.39	0.34 - 0.46	<0.001	<0.001
F32	Mental and behavioral	Depressive episode	0.65	0.58 - 0.72	<0.001	<0.001
E14	Endocrine and metabolic	Unspecified diabetes mellitus	0.44	0.36 - 0.55	<0.001	<0.001
I25	Circulatory	Chronic ischaemic heart disease	0.56	0.48 - 0.65	<0.001	<0.001
E78	Endocrine and metabolic	Disorders of lipoprotein metabolism and other lipidaemias	0.77	0.72 - 0.83	<0.001	<0.001
R18	Signs and symptoms	Ascites	0.54	0.45 - 0.64	<0.001	<0.001
F41	Mental and behavioral	Anxiety disorder	0.79	0.74 - 0.85	<0.001	<0.001
J96	Respiratory	Respiratory failure, not elsewhere classified	0.51	0.42 - 0.62	<0.001	<0.001
J90	Respiratory	Pleural effusion, not elsewhere classified	0.73	0.66 - 0.81	<0.001	<0.001
F43	Mental and behavioral	Reaction to severe stress and adjustment disorders	0.72	0.65 - 0.80	<0.001	<0.001
I10	Circulatory	Essential (primary) hypertension	0.83	0.78 - 0.89	<0.001	<0.001
E87	Endocrine and metabolic	Disorders of fluid, electrolyte and acid-base balance	0.80	0.75 - 0.87	<0.001	<0.001
J98	Respiratory	Other respiratory disorders	0.76	0.69 - 0.84	<0.001	<0.001
F33	Mental and behavioral	Recurrent depressive disorder	0.69	0.60 - 0.79	<0.001	<0.001
K59	Digestive	Other functional intestinal disorders	0.85	0.80 - 0.91	<0.001	<0.001
G47	Nervous system	Sleep disorders	0.79	0.73 - 0.87	<0.001	<0.001
J18	Respiratory	Pneumonia, unspecified organism	0.70	0.61 - 0.81	<0.001	<0.001
K21	Digestive	Gastroesophageal reflux disease	0.83	0.77 - 0.89	<0.001	<0.001
M54	Musculoskeletal	Dorsalgia	0.81	0.74 - 0.88	<0.001	<0.001
R64	Signs and symptoms	Cachexia	0.59	0.48 - 0.73	<0.001	<0.001
R11	Signs and symptoms	Nausea and vomiting	0.85	0.80 - 0.91	<0.001	<0.001
E83	Endocrine and metabolic	Disorders of mineral metabolism	0.82	0.75 - 0.89	<0.001	<0.001
R16	Signs and symptoms	Hepatomegaly and splenomegaly, not elsewhere classified	0.51	0.38 - 0.67	<0.001	<0.001
R62	Signs and symptoms	Lack of expected normal physiological development in childhood	0.62	0.50 - 0.75	<0.001	<0.001
I50	Circulatory	Heart failure	0.56	0.44 - 0.71	<0.001	<0.001
L81	Skin and subcutaneous tissue	Other disorders of pigmentation	1.46	1.24 - 1.72	<0.001	<0.001
E88	Endocrine and metabolic	Other metabolic disorders	0.76	0.67 - 0.86	<0.001	<0.001
A41	Infectious Diseases	Sepsis, unspecified organism	0.69	0.59 - 0.81	<0.001	<0.001
N17	Genitourinary	Acute kidney failure	0.75	0.66 - 0.86	<0.001	<0.001
J69	Respiratory	Pneumonitis due to solids and liquids	0.49	0.36 - 0.67	<0.001	<0.001
D68	Immune and blood	Disseminated intravascular coagulation	0.67	0.56 - 0.80	<0.001	<0.001
I27	Circulatory	Pulmonary hypertension	0.56	0.43 - 0.74	<0.001	<0.001

K57	Digestive	Diverticular disease of intestine	0.72	0.62 - 0.84	<0.001	<0.001
F17	Mental and behavioral	Nicotine dependence	0.76	0.66 - 0.86	<0.001	<0.001
I95	Circulatory	Hypotension	0.82	0.75 - 0.90	<0.001	0.001
K08	Digestive	Loss of teeth	1.79	1.36 - 2.38	<0.001	0.001
R53	Signs and symptoms	Malaise and fatigue	0.86	0.79 - 0.92	<0.001	0.001
F55	Mental and behavioral	Abuse of non-dependence-producing substances	0.72	0.62 - 0.85	<0.001	0.001
I31	Circulatory	Pericarditis	0.69	0.58 - 0.83	<0.001	0.001
J91	Respiratory	Pleural effusion in conditions classified elsewhere	0.66	0.54 - 0.81	<0.001	0.001
J45	Respiratory	Asthma	0.80	0.72 - 0.90	<0.001	0.001
R57	Signs and symptoms	Shock, not elsewhere classified	0.43	0.28 - 0.65	<0.001	0.001
I48	Circulatory	Atrial fibrillation and flutter	0.66	0.54 - 0.81	<0.001	0.001
F10	Mental and behavioral	Mental and behavioural disorders due to use of alcohol	0.52	0.37 - 0.73	<0.001	0.002
E86	Endocrine and metabolic	Volume depletion	0.81	0.73 - 0.91	<0.001	0.002
R10	Signs and symptoms	Abdominal and pelvic pain	0.84	0.76 - 0.92	<0.001	0.002
R06	Signs and symptoms	Dyspnoea	0.84	0.76 - 0.92	<0.001	0.003
K76	Digestive	Other diseases of liver	0.79	0.69 - 0.90	<0.001	0.003
412	Circulatory	Old myocardial infarction	0.38	0.22 - 0.64	<0.001	0.003
I47	Circulatory	Paroxysmal tachycardia	0.58	0.43 - 0.78	<0.001	0.003
K83	Digestive	Other diseases of biliary tract	0.60	0.45 - 0.79	<0.001	0.003
K31	Digestive	Diseases of stomach and duodenum	0.67	0.53 - 0.83	<0.001	0.003
D63	Immune and blood	Anaemia in chronic diseases classified elsewhere	0.77	0.67 - 0.89	<0.001	0.004
706	Skin and subcutaneous tissue	Disorders of sebaceous glands	1.49	1.19 - 1.85	<0.001	0.004
D64	Immune and blood	Other anaemias	0.88	0.83 - 0.95	<0.001	0.004
R14	Signs and symptoms	Flatulence and related conditions	0.72	0.60 - 0.87	0.001	0.006
L65	Skin and subcutaneous tissue	Alopecia	1.25	1.10 - 1.41	0.001	0.006
E43	Endocrine and metabolic	Unspecified severe protein-energy malnutrition	0.68	0.55 - 0.85	0.001	0.006
F90	Mental and behavioral	Attention-deficit hyperactivity disorder	0.59	0.44 - 0.80	0.001	0.006
I21	Circulatory	Acute myocardial infarction	0.28	0.13 - 0.59	0.001	0.006
D73	Immune and blood	Disorders of spleen	0.44	0.27 - 0.71	0.001	0.007
N18	Genitourinary	Chronic kidney disease	0.75	0.64 - 0.89	0.001	0.007
R52	Signs and symptoms	Pain, unspecified	0.86	0.78 - 0.94	0.001	0.007
E16	Endocrine and metabolic	Other disorders of pancreatic internal secretion	0.60	0.44 - 0.81	0.001	0.007
L85	Skin and subcutaneous tissue	Other epidermal thickening	1.29	1.11 - 1.50	0.001	0.008
M84	Musculoskeletal	Pathological fracture, not elsewhere classified	0.71	0.58 - 0.87	0.001	0.009
J15	Respiratory	Bacterial pneumonia, not elsewhere classified	0.63	0.48 - 0.83	0.001	0.009
R73	Signs and symptoms	Abnormal glucose	0.74	0.61 - 0.89	0.001	0.010
I81	Circulatory	Portal vein thrombosis	0.49	0.31 - 0.76	0.001	0.010

I89	Circulatory	Noninfective disorders of lymphatic vessels and lymph nodes	1.25	1.09 - 1.44	0.002	0.011
I24	Circulatory	Other acute ischaemic heart diseases	0.40	0.22 - 0.70	0.002	0.011
I26	Circulatory	Pulmonary embolism	0.77	0.65 - 0.91	0.002	0.013
E44	Endocrine and metabolic	Protein-calorie malnutrition of moderate and mild degree	0.63	0.47 - 0.84	0.002	0.013
F05	Mental and behavioral	Delirium, not induced by alcohol and other psychoactive substances	0.58	0.41 - 0.83	0.002	0.016
I82	Circulatory	Other venous embolism and thrombosis	0.83	0.74 - 0.94	0.002	0.016
K56	Digestive	Paralytic ileus and intestinal obstruction without hernia	0.77	0.64 - 0.91	0.003	0.017
I11	Circulatory	Hypertensive heart disease	0.60	0.43 - 0.84	0.003	0.018
I73	Circulatory	Other peripheral vascular diseases	0.70	0.55 - 0.88	0.003	0.020
D69	Immune and blood	Other nonthrombocytopenic purpura	0.88	0.80 - 0.96	0.003	0.022
R13	Signs and symptoms	Dysphagia	0.80	0.69 - 0.93	0.003	0.022
N20	Genitourinary	Calculus of kidney and ureter	0.70	0.56 - 0.89	0.004	0.024
D58	Immune and blood	Other hereditary haemolytic anaemias	0.47	0.28 - 0.78	0.004	0.024
J95	Respiratory	Postprocedural respiratory disorders	0.70	0.55 - 0.89	0.004	0.025
I08	Circulatory	Multiple valve diseases	0.31	0.14 - 0.69	0.004	0.025
R00	Signs and symptoms	Tachycardia, unspecified	0.88	0.80 - 0.96	0.005	0.028
I65	Circulatory	Occlusion and stenosis of precerebral arteries	0.50	0.31 - 0.81	0.005	0.028
R74	Signs and symptoms	Abnormal levels of serum enzymes	0.82	0.70 - 0.94	0.006	0.036
R34	Signs and symptoms	Anuria and oliguria	0.27	0.11 - 0.69	0.006	0.037
I87	Circulatory	Post thrombotic syndrome	0.63	0.45 - 0.88	0.006	0.037
E66	Endocrine and metabolic	Overweight and obesity	0.81	0.69 - 0.94	0.007	0.039
M53	Musculoskeletal	Other dorsopathies	0.86	0.78 - 0.96	0.007	0.041
G58	Nervous system	Mononeuropathies of upper limb	0.43	0.23 - 0.80	0.007	0.041
R33	Signs and symptoms	Retention of urine	0.72	0.57 - 0.92	0.008	0.042
B96	Infectious Diseases	Other bacterial agents as the cause of diseases classified elsewhere	0.77	0.63 - 0.93	0.008	0.042
I49	Circulatory	Other cardiac arrhythmias	0.85	0.76 - 0.96	0.008	0.042
M81	Musculoskeletal	Osteoporosis without current pathological fracture	1.23	1.06 - 1.44	0.008	0.043
D86	Immune and blood	Sarcoidosis	0.53	0.33 - 0.85	0.008	0.044
R23	Signs and symptoms	Other skin changes	1.37	1.08 - 1.74	0.009	0.046
N95	Genitourinary	Postmenopausal bleeding	1.22	1.05 - 1.42	0.009	0.047
D59	Immune and blood	Other autoimmune haemolytic anaemias	0.50	0.30 - 0.84	0.009	0.047
F23	Mental and behavioral	Acute and transient psychotic disorders	0.60	0.40 - 0.88	0.009	0.048
K04	Digestive	Diseases of pulp and periapical tissues	0.41	0.21 - 0.81	0.01	0.049
R07	Signs and symptoms	Pain in throat and chest	0.87	0.78 - 0.97	0.01	0.050
J38	Respiratory	Diseases of vocal cords and larynx	0.68	0.51 - 0.91	0.01	0.050
R09	Signs and symptoms	Other symptoms and signs involving the circulatory and respiratory systems	0.85	0.75 - 0.96	0.01	0.052
E53	Endocrine and metabolic	Deficiency of other B group vitamins	0.64	0.45 - 0.90	0.01	0.052

K85	Digestive	Acute pancreatitis	0.44	0.24 - 0.83	0.01	0.052
G56	Nervous system	Mononeuropathies of upper limb	0.78	0.65 - 0.95	0.01	0.052
H47	Eye, ear and adnexa	Disorders of optic nerve and visual pathways	2.04	1.18 - 3.53	0.01	0.052
I12	Circulatory	Hypertensive renal disease	0.76	0.62 - 0.94	0.01	0.054
N19	Genitourinary	Unspecified kidney failure	0.47	0.26 - 0.85	0.01	0.054
N60	Genitourinary	Benign mammary dysplasias	0.84	0.73 - 0.96	0.01	0.056
R59	Signs and symptoms	Enlarged lymph nodes	0.85	0.75 - 0.97	0.01	0.056
D27	Immune and blood	Benign neoplasm of ovary	0.51	0.30 - 0.87	0.01	0.062
715	Musculoskeletal	Osteoarthritis	0.77	0.63 - 0.95	0.01	0.063
N80	Genitourinary	Endometriosis	0.75	0.60 - 0.95	0.01	0.064
N40	Genitourinary	Benign prostatic hyperplasia	0.77	0.62 - 0.95	0.01	0.065
R63	Signs and symptoms	Loss of appetite	0.88	0.80 - 0.98	0.01	0.065
B37	Infectious Diseases	Candidiasis	0.85	0.75 - 0.97	0.02	0.066
K14	Digestive	Diseases of tongue	0.72	0.56 - 0.94	0.02	0.066
R44	Signs and symptoms	Other symptoms and signs involving general sensations and perceptions	0.46	0.25 - 0.86	0.02	0.066
M06	Musculoskeletal	Rheumatoid arthritis	0.72	0.56 - 0.95	0.02	0.073
H90	Eye, ear and adnexa	Conductive and sensorineural hearing loss	1.96	1.13 - 3.41	0.02	0.073
K72	Digestive	Hepatic failure, not elsewhere classified	0.67	0.48 - 0.93	0.02	0.074
J30	Respiratory	Vasomotor and allergic rhinitis	1.21	1.03 - 1.42	0.02	0.076
M48	Musculoskeletal	Spondylopathies	0.76	0.61 - 0.96	0.02	0.081
I51	Circulatory	Complications and ill-defined descriptions of heart disease	0.76	0.61 - 0.96	0.02	0.083
L90	Skin and subcutaneous tissue	Atrophic disorders of skin	1.28	1.04 - 1.58	0.02	0.083
G92	Nervous system	Toxic encephalopathy	0.64	0.44 - 0.94	0.02	0.085
K86	Digestive	Diseases of pancreas	0.73	0.56 - 0.96	0.02	0.087
M40	Musculoskeletal	Kyphosis and lordosis	0.48	0.25 - 0.90	0.02	0.087
L89	Skin and subcutaneous tissue	Decubitus ulcer and pressure area	0.76	0.60 - 0.96	0.02	0.088
K29	Digestive	Gastritis and duodenitis	0.84	0.72 - 0.98	0.02	0.089
I13	Circulatory	Hypertensive heart and chronic kidney disease	0.47	0.24 - 0.90	0.02	0.089
E46	Endocrine and metabolic	Unspecified protein-energy malnutrition	0.73	0.55 - 0.96	0.02	0.090
N83	Genitourinary	Noninflammatory disorders of ovary, fallopian tube and broad ligament	0.82	0.69 - 0.98	0.02	0.093
K05	Digestive	Gingivitis and periodontal diseases	1.63	1.06 - 2.49	0.03	0.094
J44	Respiratory	Chronic obstructive pulmonary disease	0.80	0.67 - 0.97	0.03	0.095
R41	Signs and symptoms	Other symptoms and signs involving cognitive functions and awareness	0.79	0.65 - 0.97	0.03	0.095
F42	Mental and behavioral	Obsessive-compulsive disorder	0.44	0.21 - 0.91	0.03	0.095
R04	Signs and symptoms	Haemorrhage from respiratory passages	0.81	0.67 - 0.98	0.03	0.096
R19	Signs and symptoms	Other symptoms and signs involving the digestive system and abdomen	0.90	0.82 - 0.99	0.03	0.099
K22	Digestive	Oesophageal obstruction	0.90	0.82 - 0.99	0.03	0.099

496	Respiratory	Chronic airway obstruction, not elsewhere classified	0.74	0.56 - 0.97	0.03	0.099
G25	Nervous system	Extrapyramidal and movement disorders	0.76	0.59 - 0.97	0.03	0.099
E55	Endocrine and metabolic	Vitamin D deficiency	1.17	1.02 - 1.34	0.03	0.099
D62	Immune and blood	Other specified anaemias	0.80	0.65 - 0.98	0.03	0.10
I45	Circulatory	Conduction disorders	0.81	0.67 - 0.98	0.03	0.11
E80	Endocrine and metabolic	Disorders of porphyrin and bilirubin metabolism	0.77	0.61 - 0.98	0.03	0.11
I42	Circulatory	Cardiomyopathy	0.75	0.57 - 0.98	0.03	0.11
G93	Nervous system	Other disorders of brain	0.85	0.74 - 0.99	0.03	0.11
J81	Respiratory	Pulmonary oedema	0.62	0.40 - 0.96	0.03	0.11
I85	Circulatory	Oesophageal varices	0.41	0.18 - 0.94	0.03	0.12
591	Genitourinary	Hydronephrosis	0.76	0.59 - 0.98	0.04	0.12
R78	Signs and symptoms	Findings of drugs and other substances in blood	0.72	0.53 - 0.99	0.04	0.13
M10	Musculoskeletal	Gout	0.73	0.54 - 0.99	0.04	0.13
288	Immune and blood	Diseases of white blood cells	0.91	0.84 - 1.00	0.04	0.14
R93	Signs and symptoms	Abnormal findings on diagnostic imaging of lung	0.79	0.63 - 0.99	0.04	0.14
K61	Digestive	Abscess of anal and rectal regions	0.49	0.24 - 0.98	0.04	0.14
N85	Genitourinary	Other noninflammatory disorders of uterus	0.60	0.37 - 0.99	0.04	0.14
J84	Respiratory	Other interstitial pulmonary diseases	0.79	0.63 - 0.99	0.04	0.14
M51	Musculoskeletal	Other intervertebral disc disorders	0.83	0.69 - 1.00	0.04	0.14
E29	Endocrine and metabolic	Testicular dysfunction	0.52	0.28 - 0.99	0.04	0.14
N76	Genitourinary	Vaginitis and vulvovaginitis	0.69	0.48 - 0.99	0.05	0.14
K03	Digestive	Other diseases of hard tissues of teeth	1.74	1.00 - 3.02	0.05	0.15
424	Circulatory	Nonrheumatic aortic valve disorders	0.79	0.62 - 1.00	0.05	0.15
R68	Signs and symptoms	Other general symptoms and signs	0.85	0.72 - 1.00	0.05	0.15
J34	Respiratory	Chronic sinusitis	1.23	1.00 - 1.51	0.05	0.16
F48	Mental and behavioral	Neurotic disorders, not elsewhere classified	0.92	0.84 - 1.00	0.05	0.16
K82	Digestive	Other diseases of gallbladder	0.68	0.47 - 1.01	0.05	0.16
D76	Immune and blood	Haemophagocytic syndrome	0.53	0.28 - 1.01	0.05	0.16
M60	Musculoskeletal	Disorders of muscle	0.53	0.28 - 1.01	0.05	0.16
L27	Skin and subcutaneous tissue	Dermatitis due to substances taken internally	1.14	1.00 - 1.31	0.06	0.17
K81	Digestive	Cholecystitis	0.52	0.27 - 1.02	0.06	0.17
M85	Musculoskeletal	Disorders of bone density and structure	1.15	0.99 - 1.34	0.06	0.17
M50	Musculoskeletal	Other cervical disc disorders	0.83	0.69 - 1.01	0.06	0.17
R92	Signs and symptoms	Abnormal findings on diagnostic imaging of breast	1.78	0.97 - 3.26	0.06	0.18
L92	Skin and subcutaneous tissue	Granulomatous disorders of skin and subcutaneous tissue	0.55	0.29 - 1.04	0.06	0.18

D75	Immune and blood	Other diseases of blood and blood-forming organs	0.82	0.67 - 1.01	0.07	0.19
J43	Respiratory	Emphysema	0.83	0.68 - 1.01	0.07	0.19
K25	Digestive	Gastric ulcer	0.70	0.48 - 1.03	0.07	0.20
E61	Endocrine and metabolic	Deficiency of other nutrient elements	1.53	0.96 - 2.43	0.07	0.20
R56	Signs and symptoms	Convulsions	0.76	0.56 - 1.03	0.07	0.20
K58	Digestive	Irritable bowel syndrome	0.81	0.65 - 1.02	0.07	0.20
B19	Infectious Diseases	Viral hepatitis, unspecified	0.82	0.66 - 1.02	0.08	0.22
I35	Circulatory	Nonrheumatic aortic valve disorders	0.68	0.44 - 1.05	0.08	0.22
E07	Endocrine and metabolic	Disorders of thyroid gland	0.72	0.50 - 1.04	0.08	0.22
M95	Musculoskeletal	Other acquired deformities of musculoskeletal system	1.70	0.94 - 3.10	0.08	0.22
H51	Eye, ear and adnexa	Disorders of binocular movement	0.58	0.31 - 1.07	0.08	0.22
K13	Digestive	Diseases of lips	1.09	0.99 - 1.20	0.09	0.23
K92	Digestive	Noninfective gastroenteritis and colitis	0.79	0.61 - 1.03	0.09	0.23
J42	Respiratory	Simple and mucopurulent chronic bronchitis	0.63	0.37 - 1.07	0.09	0.23
F06	Mental and behavioral	Other mental disorders due to brain damage and dysfunction and to physical disease	0.79	0.60 - 1.03	0.09	0.23
I70	Circulatory	Atherosclerosis	0.59	0.33 - 1.08	0.09	0.23
E67	Endocrine and metabolic	Other hyperalimentation	0.83	0.68 - 1.03	0.09	0.24
E28	Endocrine and metabolic	Other ovarian dysfunction	0.81	0.64 - 1.03	0.09	0.24
G51	Nervous system	Facial nerve disorders	0.74	0.52 - 1.05	0.09	0.24
M24	Musculoskeletal	Disorders of synovium and tendon	0.53	0.26 - 1.11	0.09	0.24
B24	Infectious Diseases	Human immunodeficiency virus disease	0.53	0.26 - 1.11	0.09	0.24
R50	Signs and symptoms	Fever of other and unknown origin	0.92	0.83 - 1.02	0.10	0.24
I46	Circulatory	Cardiac arrest	0.57	0.29 - 1.11	0.10	0.25
G44	Nervous system	Other headache syndromes	1.35	0.94 - 1.93	0.10	0.25
J40	Respiratory	Bronchitis, not specified as acute or chronic	0.72	0.48 - 1.07	0.10	0.26
F60	Mental and behavioral	Specific personality disorders	0.56	0.28 - 1.13	0.10	0.26
D53	Immune and blood	Anaemia due to folate deficiency	0.65	0.39 - 1.10	0.11	0.26
G72	Nervous system	Other myopathies	0.69	0.44 - 1.09	0.11	0.27
R61	Signs and symptoms	Hyperhidrosis	0.84	0.68 - 1.04	0.11	0.27
F25	Mental and behavioral	Schizoaffective disorders	0.81	0.63 - 1.05	0.11	0.27
R82	Signs and symptoms	Other abnormal findings in urine	0.69	0.44 - 1.09	0.11	0.27
G43	Nervous system	Migraine	0.91	0.81 - 1.02	0.12	0.28
M16	Musculoskeletal	Coxarthrosis	0.65	0.38 - 1.11	0.12	0.28
H05	Eye, ear and adnexa	Disorders of lacrimal system	0.69	0.43 - 1.10	0.12	0.29
M41	Musculoskeletal	Structural scoliosis	0.83	0.66 - 1.05	0.12	0.29
I62	Circulatory	Nontraumatic intracerebral haemorrhage	0.60	0.32 - 1.15	0.12	0.29
I63	Circulatory	Immunodeficiency, not elsewhere classified	0.68	0.42 - 1.11	0.12	0.29

K71	Digestive	Fistula of vagina to peritoneum and retroperitoneum	0.60	0.32 - 1.15	0.12	0.29
H92	Eye, ear and adnexa	Osteomyelitis	0.74	0.50 - 1.09	0.12	0.29
J47	Respiratory	Multiple sclerosis	0.73	0.48 - 1.09	0.12	0.29
J00	Respiratory	Other diseases of pharynx	1.42	0.90 - 2.25	0.13	0.30
R03	Signs and symptoms	Diseases of stomach	0.75	0.51 - 1.09	0.13	0.30
I44	Circulatory	Paraplegia and tetraplegia	0.80	0.59 - 1.07	0.13	0.31
N36	Genitourinary	Sickle-cell disorders	0.87	0.72 - 1.05	0.14	0.31
G57	Nervous system	Urinary tract infection, site not specified	1.11	0.97 - 1.27	0.14	0.31
N70	Genitourinary	Nephrotic syndrome	0.74	0.50 - 1.10	0.14	0.31
G40	Nervous system	Duodenal ulcer	0.85	0.69 - 1.06	0.14	0.32
J93	Respiratory	Nail disorders	0.84	0.67 - 1.06	0.14	0.32
B95	Infectious Diseases	Difficulty in walking	0.84	0.67 - 1.06	0.14	0.32
K26	Digestive	Umbilical hernia	0.62	0.32 - 1.18	0.15	0.32
F20	Mental and behavioral	Thyrotoxicosis	0.62	0.32 - 1.18	0.15	0.32
L91	Skin and subcutaneous tissue	Other disorders of nervous system	1.14	0.96 - 1.35	0.15	0.34
E89	Endocrine and metabolic	Hemiplegia	0.85	0.68 - 1.07	0.16	0.36
F19	Mental and behavioral	Benign neoplasm of brain and other parts of central nervous system	0.80	0.58 - 1.10	0.16	0.36
M75	Musculoskeletal	Other skin changes	0.74	0.49 - 1.13	0.17	0.36
R15	Signs and symptoms	Enthesopathies	0.73	0.47 - 1.14	0.17	0.37
N39	Genitourinary	Vascular disorders of intestine	0.90	0.76 - 1.05	0.17	0.37
B97	Infectious Diseases	Somnolence	0.86	0.70 - 1.07	0.17	0.38
G50	Nervous system	Aplastic anaemia	0.71	0.43 - 1.17	0.18	0.38
J94	Respiratory	Agranulocytosis	0.79	0.56 - 1.11	0.18	0.38
240	Endocrine and metabolic	Haemangioma and lymphangioma, any site	0.69	0.40 - 1.18	0.18	0.38
R49	Signs and symptoms	Schizotypal disorder	0.84	0.65 - 1.08	0.18	0.38
D35	Immune and blood	Psoriasis	0.79	0.57 - 1.11	0.18	0.38
K66	Digestive	Paralytic strabismus	0.88	0.72 - 1.06	0.18	0.38
F31	Mental and behavioral	Disorders of adrenal gland	0.75	0.49 - 1.15	0.18	0.39
K74	Digestive	Other systemic involvement of connective tissue	0.84	0.65 - 1.09	0.19	0.39
L70	Skin and subcutaneous tissue	Other disorders of eye and adnexa	1.16	0.93 - 1.44	0.19	0.39
E79	Endocrine and metabolic	Stomatitis and related lesions	0.80	0.56 - 1.12	0.19	0.40
F03	Mental and behavioral	Mental and behavioural disorders due to use of cannabinoids	1.49	0.82 - 2.70	0.19	0.40
N85	Genitourinary	Seborrhoeic keratosis	0.83	0.62 - 1.10	0.20	0.41
J70	Respiratory	Type 1 diabetes mellitus	0.79	0.56 - 1.13	0.20	0.41
N73	Genitourinary	Mental and behavioural disorders due to use of opioids	1.35	0.85 - 2.13	0.20	0.41
N84	Genitourinary	Haemorrhage, not elsewhere classified	0.74	0.47 - 1.17	0.20	0.41
N50	Genitourinary	Other disorders of bladder	1.28	0.88 - 1.86	0.20	0.41
702	Skin and subcutaneous tissue	Excessive, frequent and irregular menstruation	1.24	0.88 - 1.74	0.22	0.44

K63	Digestive	Other disorders of kidney and ureter	1.10	0.94 - 1.29	0.22	0.44
H11	Eye, ear and adnexa	Dysarthria and anarthria	1.25	0.88 - 1.78	0.22	0.44
R45	Signs and symptoms	Diaphragmatic hernia	0.82	0.60 - 1.13	0.22	0.44
D23	Immune and blood	Cystitis	1.14	0.92 - 1.41	0.22	0.44
M89	Musculoskeletal	Leiomyoma of uterus	0.95	0.87 - 1.04	0.22	0.45
L57	Skin and subcutaneous tissue	Infectious mononucleosis	1.22	0.89 - 1.68	0.23	0.45
H54	Eye, ear and adnexa	Synovitis and tenosynovitis	1.19	0.90 - 1.57	0.23	0.45
L30	Skin and subcutaneous tissue	Ankylosing spondylitis	1.10	0.94 - 1.29	0.23	0.46
H53	Eye, ear and adnexa	Disorders of eyelid	1.08	0.95 - 1.23	0.24	0.46
R91	Signs and symptoms	Hereditary haemorrhagic telangiectasia	0.93	0.83 - 1.05	0.24	0.46
R79	Signs and symptoms	Varicose veins of lower extremities	0.89	0.74 - 1.08	0.24	0.47
M32	Musculoskeletal	Herpesviral [herpes simplex] infections	0.74	0.44 - 1.24	0.25	0.47
D21	Immune and blood	Deficiency of other vitamins	1.28	0.84 - 1.95	0.25	0.47
L73	Skin and subcutaneous tissue	Other hernia of abdominal cavity without obstruction or gangrene	1.18	0.89 - 1.56	0.25	0.47
M46	Musculoskeletal	Disorders of amino-acid metabolism	1.45	0.77 - 2.71	0.25	0.47
F39	Mental and behavioral	Disorders of autonomic nervous system	0.76	0.48 - 1.21	0.25	0.48
B48	Infectious Diseases	Acute sinusitis	1.34	0.81 - 2.21	0.25	0.48
G95	Nervous system	Female genital prolapse	0.86	0.67 - 1.11	0.25	0.48
R35	Signs and symptoms	Diseases of external ear	1.10	0.93 - 1.31	0.25	0.48
N91	Genitourinary	Pruritus	1.29	0.83 - 2.01	0.25	0.48
M96	Musculoskeletal	Other joint disorders	0.70	0.38 - 1.29	0.26	0.48
R30	Signs and symptoms	Diseases of liver	1.13	0.91 - 1.39	0.26	0.49
H04	Eye, ear and adnexa	Benign neoplasm of other and unspecified parts of digestive system	1.12	0.92 - 1.38	0.27	0.49
N31	Genitourinary	Myelodysplastic syndromes	1.41	0.77 - 2.59	0.27	0.49
L53	Skin and subcutaneous tissue	Nephropathy induced by drugs, medicaments and biological substances	0.91	0.77 - 1.08	0.27	0.50
I61	Circulatory	Other specified abnormal immunological findings in serum	0.80	0.54 - 1.19	0.28	0.50
D80	Immune and blood	Hypertrophy of breast	0.79	0.51 - 1.21	0.28	0.50
N82	Genitourinary	Tubulo-interstitial nephritis, not specified as acute or chronic	0.73	0.41 - 1.29	0.28	0.50
M86	Musculoskeletal	Other bacterial intestinal infections	0.73	0.41 - 1.29	0.28	0.50
G35	Nervous system	Localized swelling, mass and lump of skin and subcutaneous tissue	0.75	0.45 - 1.26	0.28	0.50
J39	Respiratory	Isolated proteinuria	1.08	0.93 - 1.26	0.29	0.52
536	Digestive	Other specific arthropathies	1.16	0.88 - 1.51	0.29	0.52
G83	Nervous system	Benign neoplasm of meninges	0.80	0.53 - 1.21	0.29	0.52
D57	Immune and blood	Benign neoplasm of other and unspecified endocrine glands	1.31	0.79 - 2.15	0.29	0.52
N39	Genitourinary	Influenza due to identified influenza virus with other respiratory manifestations	0.87	0.68 - 1.12	0.29	0.52
N05	Genitourinary	Functional dyspepsia	0.72	0.39 - 1.33	0.29	0.52
K27	Digestive	Other nonorganic psychotic disorders	0.82	0.56 - 1.19	0.30	0.53

L60	Skin and subcutaneous tissue	Zoster [herpes zoster]	1.09	0.92 - 1.29	0.31	0.54
R26	Signs and symptoms	Cough	0.90	0.73 - 1.11	0.31	0.54
K42	Digestive	Abnormal involuntary movements	0.78	0.49 - 1.26	0.31	0.54
E05	Endocrine and metabolic	Cholelithiasis	1.14	0.89 - 1.47	0.31	0.54
G97	Nervous system	Disseminated intravascular coagulation	0.77	0.46 - 1.29	0.31	0.55
G81	Nervous system	Other disorders of gingiva and edentulous alveolar ridge	0.83	0.59 - 1.19	0.32	0.55
D33	Immune and blood	Chronic viral hepatitis	0.74	0.42 - 1.33	0.32	0.55
R23	Signs and symptoms	Aortic aneurysm and dissection	1.08	0.93 - 1.25	0.32	0.55
M77	Musculoskeletal	Other predominantly sexually transmitted diseases	0.83	0.56 - 1.21	0.32	0.55
K55	Digestive	Glaucoma	1.36	0.74 - 2.47	0.32	0.55
R40	Signs and symptoms	Other nontoxic goiter	0.79	0.50 - 1.25	0.32	0.55
K65	Digestive	Otitis media	0.85	0.62 - 1.17	0.32	0.55
D61	Immune and blood	Other disorders of circulatory system	1.05	0.95 - 1.17	0.33	0.55
D70	Immune and blood	Actinomycosis	1.05	0.95 - 1.16	0.33	0.56
D18	Immune and blood	Fissure and fistula of anal and rectal regions	0.88	0.67 - 1.15	0.33	0.56
F21	Mental and behavioral	Other postprocedural disorders of genitourinary system	0.77	0.44 - 1.32	0.34	0.56
L40	Skin and subcutaneous tissue	Anogenital herpesviral [herpes simplex] infections	0.89	0.69 - 1.13	0.34	0.56
H49	Eye, ear and adnexa	Acute pharyngitis	0.77	0.44 - 1.32	0.34	0.56
E27	Endocrine and metabolic	Disorders of penis	0.90	0.73 - 1.12	0.34	0.56
M35	Musculoskeletal	Intestinal malabsorption	0.86	0.64 - 1.17	0.34	0.57
H57	Eye, ear and adnexa	Postprocedural disorders of circulatory system	0.90	0.74 - 1.11	0.34	0.57
K12	Digestive	Special symptoms or syndromes not elsewhere classified	1.06	0.94 - 1.19	0.36	0.58
F12	Mental and behavioral	Benign neoplasm of skin	0.91	0.74 - 1.12	0.36	0.59
L82	Skin and subcutaneous tissue	Other spirochaetal diseases	1.16	0.84 - 1.59	0.36	0.59
E10	Endocrine and metabolic	Polyarthrosis	0.77	0.44 - 1.36	0.37	0.60
F11	Mental and behavioral	Unspecified jaundice	0.77	0.44 - 1.36	0.37	0.60
R58	Signs and symptoms	Hyperfunction of pituitary gland	0.77	0.44 - 1.36	0.37	0.60
N32	Genitourinary	Benign neoplasm of bone and articular cartilage	0.89	0.69 - 1.15	0.37	0.60
N92	Genitourinary	Hypertrophy of breast	0.87	0.65 - 1.18	0.37	0.60
N28	Genitourinary	Other venereal diseases	0.94	0.82 - 1.08	0.38	0.60
R47	Signs and symptoms	Chronic laryngitis and laryngotracheitis	0.88	0.65 - 1.18	0.38	0.60
K44	Digestive	Acute sinusitis	0.90	0.70 - 1.14	0.38	0.61
N30	Genitourinary	Contact dermatitis	1.13	0.86 - 1.50	0.38	0.61
D25	Immune and blood	Benign lipomatous neoplasm	0.93	0.80 - 1.09	0.39	0.61
B27	Infectious Diseases	Benign neoplasm of ovary	0.86	0.62 - 1.21	0.39	0.62
M67	Musculoskeletal	Disorders of synovium and tendon	0.77	0.42 - 1.40	0.40	0.62
M43	Musculoskeletal	Other deforming dorsopathies	0.80	0.47 - 1.34	0.40	0.62

H02	Eye, ear and adnexa	Other disorders of eyelid	0.90	0.70 - 1.15	0.40	0.62
I78	Circulatory	Diseases of capillaries	1.23	0.76 - 1.99	0.40	0.62
I83	Circulatory	Varicose veins of lower extremities	1.17	0.81 - 1.69	0.40	0.62
B00	Infectious Diseases	Herpesviral [herpes simplex] infections	0.91	0.73 - 1.14	0.41	0.63
E63	Endocrine and metabolic	Other nutritional deficiencies	1.30	0.69 - 2.46	0.41	0.63
K43	Digestive	Ventral hernia	0.85	0.58 - 1.25	0.42	0.63
E72	Endocrine and metabolic	Disorders of amino-acid metabolism	1.24	0.74 - 2.06	0.42	0.63
G90	Nervous system	Disorders of autonomic nervous system	0.84	0.55 - 1.29	0.42	0.63
J01	Respiratory	Acute sinusitis	0.82	0.50 - 1.33	0.42	0.63
N81	Genitourinary	Female genital prolapse	0.82	0.50 - 1.33	0.42	0.63
H61	Eye, ear and adnexa	Other disorders of the external ear	1.20	0.78 - 1.85	0.42	0.63
L29	Skin and subcutaneous tissue	Pruritus	1.04	0.94 - 1.16	0.42	0.64
M25	Musculoskeletal	Other joint disorders	1.03	0.96 - 1.11	0.43	0.64
K75	Digestive	Other inflammatory liver diseases	0.87	0.63 - 1.22	0.43	0.64
D13	Immune and blood	Benign neoplasm of other and unspecified parts of digestive system	0.90	0.69 - 1.17	0.43	0.64
D46	Immune and blood	Myelodysplastic syndromes	0.77	0.41 - 1.46	0.43	0.64
N14	Genitourinary	Tubulo-interstitial nephritis, not specified as acute or chronic	0.77	0.41 - 1.46	0.43	0.64
R76	Signs and symptoms	Other abnormal immunological findings in serum	1.25	0.72 - 2.15	0.43	0.64
N62	Genitourinary	Hypertrophy of breast	0.86	0.60 - 1.24	0.43	0.64
N12	Genitourinary	Tubulo-interstitial nephritis, not specified as acute or chronic	0.81	0.47 - 1.38	0.43	0.64
A04	Infectious Diseases	Other bacterial intestinal infections	0.90	0.69 - 1.17	0.43	0.64
R22	Signs and symptoms	Localized swelling, mass and lump of skin and subcutaneous tissue	0.91	0.73 - 1.15	0.44	0.65
R80	Signs and symptoms	Proteinuria, unspecified	0.81	0.48 - 1.37	0.44	0.65
M12	Musculoskeletal	Other specific arthropathies	0.92	0.76 - 1.13	0.45	0.65
D32	Immune and blood	Benign neoplasm of meninges	1.23	0.72 - 2.10	0.45	0.65
D36	Immune and blood	Benign neoplasm unspecified site	0.84	0.54 - 1.31	0.45	0.65
J10	Respiratory	Influenza due to other identified influenza virus	0.79	0.44 - 1.45	0.45	0.65
K30	Digestive	Dyspepsia	1.11	0.84 - 1.46	0.45	0.65
F28	Mental and behavioral	Other nonorganic psychotic disorders	0.85	0.55 - 1.31	0.45	0.65
B02	Infectious Diseases	Zoster [herpes zoster]	0.92	0.75 - 1.14	0.46	0.65
R05	Signs and symptoms	Cough	0.96	0.87 - 1.06	0.46	0.65
R25	Signs and symptoms	Abnormal involuntary movements	1.07	0.89 - 1.30	0.46	0.65
K80	Digestive	Cholelithiasis	0.92	0.74 - 1.15	0.47	0.67
D65	Immune and blood	Disseminated intravascular coagulation	0.78	0.40 - 1.53	0.47	0.67
K06	Digestive	Other disorders of gingiva and edentulous alveolar ridge	1.20	0.72 - 2.00	0.47	0.67
B18	Infectious Diseases	Chronic viral hepatitis	0.87	0.58 - 1.29	0.48	0.68
I71	Circulatory	Aortic aneurysm and dissection	1.16	0.76 - 1.77	0.48	0.68

A63	Infectious Diseases	Other predominantly sexually transmitted diseases, not elsewhere classified	1.16	0.76 - 1.77	0.48	0.68
H40	Eye, ear and adnexa	Glaucoma	0.92	0.73 - 1.16	0.49	0.68
E04	Endocrine and metabolic	Other nontoxic goitre	0.96	0.84 - 1.09	0.50	0.69
H66	Eye, ear and adnexa	Suppurative and unspecified otitis media	0.84	0.50 - 1.40	0.50	0.69
I98	Circulatory	Other disorders of circulatory system in diseases classified elsewhere	1.11	0.81 - 1.52	0.50	0.69
A42	Infectious Diseases	Actinomycosis	0.91	0.70 - 1.20	0.51	0.70
K60	Digestive	Fissure and fistula of anal and rectal regions	1.11	0.82 - 1.51	0.51	0.70
N99	Genitourinary	Other disorders of genitourinary system	1.15	0.75 - 1.78	0.52	0.71
A60	Infectious Diseases	Anogenital herpesviral infections	1.17	0.73 - 1.86	0.52	0.71
J02	Respiratory	Acute pharyngitis	1.05	0.90 - 1.23	0.53	0.72
N48	Genitourinary	Other disorders of penis	1.13	0.77 - 1.68	0.53	0.72
K90	Digestive	Intestinal malabsorption	0.88	0.60 - 1.30	0.53	0.72
I97	Circulatory	Other postprocedural disorders of circulatory system, not elsewhere classified	1.12	0.78 - 1.61	0.53	0.72
307	Signs and symptoms	Special symptoms or syndromes not elsewhere classified	1.14	0.75 - 1.73	0.53	0.72
D22	Immune and blood	Melanocytic naevi	0.93	0.74 - 1.17	0.54	0.73
A69	Infectious Diseases	Other spirochaetal infections	0.81	0.41 - 1.59	0.54	0.73
M15	Musculoskeletal	Polyarthrosis	1.16	0.71 - 1.91	0.55	0.73
R17	Signs and symptoms	Unspecified jaundice	1.12	0.77 - 1.63	0.55	0.73
E22	Endocrine and metabolic	Hyperfunction of pituitary gland	0.92	0.69 - 1.22	0.56	0.74
D16	Immune and blood	Benign neoplasm (abnormal growth of tissue) of bone and articular cartilage	1.20	0.65 - 2.25	0.56	0.74
612	Signs and symptoms	Deformity and disproportion of reconstructed breast	1.16	0.71 - 1.88	0.56	0.74
K11	Digestive	Diseases of salivary glands	0.95	0.79 - 1.14	0.56	0.74
A74	Infectious Diseases	Other diseases caused by chlamydiae	0.89	0.59 - 1.33	0.56	0.74
J31	Respiratory	Chronic rhinitis nasopharyngitis	0.87	0.54 - 1.40	0.57	0.75
J85	Respiratory	Abscess of lung and mediastinum	1.16	0.69 - 1.97	0.57	0.75
I72	Circulatory	Other aneurysm	1.16	0.69 - 1.97	0.57	0.75
H81	Eye, ear and adnexa	Disorders of vestibular function	0.85	0.47 - 1.52	0.58	0.75
R31	Signs and symptoms	Unspecified haematuria	0.93	0.74 - 1.19	0.58	0.76
B35	Infectious Diseases	Dermatophytosis	0.92	0.68 - 1.24	0.58	0.76
J32	Respiratory	Chronic sinusitis	0.94	0.77 - 1.17	0.60	0.77
L25	Skin and subcutaneous tissue	Unspecified contact dermatitis	1.05	0.88 - 1.25	0.60	0.78
D17	Immune and blood	Benign lipomatous neoplasm	0.91	0.66 - 1.28	0.60	0.78
N89	Genitourinary	Noninflammatory disorders of the vagina	1.04	0.89 - 1.23	0.61	0.78
M47	Musculoskeletal	Spondylosis	0.94	0.74 - 1.20	0.61	0.79

L98	Skin and subcutaneous tissue	Other disorders of skin and subcutaneous tissue, not elsewhere classified	1.03	0.92 - 1.15	0.61	0.79
D50	Immune and blood	Iron deficiency anaemia	0.96	0.83 - 1.11	0.61	0.79
N43	Genitourinary	Hydrocele and spermatocele	1.17	0.62 - 2.23	0.62	0.79
R94	Signs and symptoms	Abnormal results of function studies	0.97	0.84 - 1.11	0.63	0.80
I74	Circulatory	Arterial embolism and thrombosis	0.86	0.46 - 1.60	0.63	0.80
F45	Mental and behavioral	Somatoform disorders	0.86	0.47 - 1.59	0.63	0.80
N64	Genitourinary	Other disorders of breast	0.97	0.87 - 1.09	0.65	0.82
R32	Signs and symptoms	Unspecified urinary incontinence	1.06	0.83 - 1.35	0.65	0.82
K50	Digestive	Crohns disease	0.91	0.61 - 1.37	0.65	0.82
G62	Nervous system	Other polyneuropathies	0.98	0.91 - 1.06	0.66	0.83
R55	Signs and symptoms	Syncope and collapse	1.06	0.82 - 1.36	0.66	0.83
M79	Musculoskeletal	Other and unspecified soft tissue disorders, not elsewhere classified	0.98	0.92 - 1.06	0.67	0.83
K20	Digestive	Oesophagitis	0.95	0.76 - 1.20	0.67	0.83
J86	Respiratory	Pyothorax	0.90	0.54 - 1.49	0.67	0.83
M87	Musculoskeletal	Osteonecrosis	0.91	0.57 - 1.45	0.68	0.84
H52	Eye, ear and adnexa	Disorders of refraction and accommodation	1.06	0.79 - 1.43	0.68	0.84
N63	Genitourinary	Unspecified lump in breast	1.08	0.74 - 1.58	0.68	0.84
H93	Eye, ear and adnexa	Other disorders of ear, not elsewhere classified	1.03	0.89 - 1.20	0.69	0.84
B89	Infectious Diseases	Unspecified parasitic disease	0.88	0.46 - 1.69	0.69	0.84
J06	Respiratory	Acute upper respiratory infections of multiple and unspecified sites	0.97	0.81 - 1.15	0.69	0.84
H43	Eye, ear and adnexa	Disorders of vitreous body	1.10	0.69 - 1.77	0.69	0.84
L97	Skin and subcutaneous tissue	Ulcer of lower limb, not elsewhere classified	0.88	0.46 - 1.69	0.69	0.84
M13	Musculoskeletal	Other arthritis	1.08	0.74 - 1.57	0.69	0.84
R12	Signs and symptoms	Heartburn	0.96	0.76 - 1.20	0.70	0.85
M62	Musculoskeletal	Other disorders of muscle	0.96	0.78 - 1.18	0.70	0.85
H00	Eye, ear and adnexa	Hordeolum and chalazion	1.11	0.65 - 1.90	0.70	0.85
R42	Signs and symptoms	Dizziness and giddiness	0.97	0.85 - 1.11	0.70	0.85
D34	Immune and blood	Benign neoplasm of thyroid gland	1.13	0.60 - 2.13	0.71	0.85
K46	Digestive	Unspecified abdominal hernia	0.90	0.51 - 1.60	0.72	0.86
E06	Endocrine and metabolic	Thyroiditis	1.04	0.84 - 1.28	0.72	0.86
K51	Digestive	Ulcerative colitis	0.94	0.67 - 1.32	0.72	0.86
R21	Signs and symptoms	Rash and other nonspecific skin eruption	1.02	0.92 - 1.13	0.73	0.87
L03	Skin and subcutaneous tissue	Cellulitis	0.97	0.84 - 1.13	0.73	0.87
G98	Nervous system	Other disorders of central nervous system, not elsewhere classified	1.11	0.61 - 2.01	0.73	0.87
E21	Endocrine and metabolic	Hyperparathyroidism	0.93	0.60 - 1.44	0.75	0.88
H01	Eye, ear and adnexa	Blepharitis	0.93	0.59 - 1.46	0.75	0.88
K52	Digestive	Noninfective gastroenteritis and colitis	0.98	0.84 - 1.13	0.75	0.88

G54	Nervous system	Nerve root and plexus disorders	1.07	0.71 - 1.62	0.75	0.88
B34	Infectious Diseases	Viral infection of unspecified site	1.03	0.87 - 1.21	0.76	0.89
M21	Musculoskeletal	Other acquired deformities of limbs	0.95	0.69 - 1.31	0.77	0.89
B20	Infectious Diseases	Human immunodeficiency virus [HIV] disease	1.09	0.63 - 1.88	0.77	0.89
H91	Eye, ear and adnexa	Hearing loss	1.02	0.88 - 1.19	0.78	0.90
J04	Respiratory	Acute laryngitis and tracheitis	0.92	0.50 - 1.69	0.78	0.91
M63	Musculoskeletal	Disorders of muscle in diseases classified elsewhere	1.04	0.79 - 1.37	0.79	0.91
R60	Signs and symptoms	Edema	0.99	0.88 - 1.10	0.79	0.91
H26	Eye, ear and adnexa	Other cataract	1.03	0.82 - 1.29	0.79	0.91
N93	Genitourinary	Other abnormal uterine and vaginal bleeding	1.03	0.83 - 1.27	0.79	0.91
L21	Skin and subcutaneous tissue	Seborrheic dermatitis	0.92	0.52 - 1.65	0.79	0.91
M65	Musculoskeletal	Synovitis and tenosynovitis	1.09	0.58 - 2.04	0.80	0.91
G31	Nervous system	Other degenerative diseases of nervous system, not elsewhere classified	1.05	0.73 - 1.52	0.79	0.91
R84	Signs and symptoms	Abnormal findings in specimens from respiratory organs and thorax	0.94	0.56 - 1.56	0.80	0.91
N61	Genitourinary	Inflammatory disorders of breast	1.04	0.76 - 1.44	0.80	0.91
L50	Skin and subcutaneous tissue	Urticaria	1.03	0.82 - 1.30	0.80	0.91
A08	Infectious Diseases	Viral and other specified intestinal infections	1.03	0.81 - 1.32	0.80	0.91
K62	Digestive	Other diseases of anus and rectum	1.02	0.84 - 1.25	0.81	0.91
D84	Immune and blood	Immunodeficiency, unspecified	1.03	0.81 - 1.31	0.81	0.91
L08	Skin and subcutaneous tissue	Other local infections of skin and subcutaneous tissue	1.04	0.78 - 1.38	0.81	0.91
J12	Respiratory	Viral pneumonia, not elsewhere classified	0.95	0.64 - 1.42	0.81	0.91
G61	Nervous system	Inflammatory polyneuropathy	0.98	0.82 - 1.17	0.83	0.91
E13	Endocrine and metabolic	Other specified diabetes mellitus	1.05	0.67 - 1.67	0.82	0.91
I77	Circulatory	Other disorders of arteries and arterioles	1.06	0.66 - 1.69	0.82	0.91
H16	Eye, ear and adnexa	Keratitis	1.07	0.60 - 1.90	0.82	0.91
I34	Circulatory	Nonrheumatic mitral valve disorders	0.97	0.77 - 1.23	0.82	0.91
R71	Signs and symptoms	Abnormality of red blood cells	1.07	0.60 - 1.90	0.82	0.91
D24	Immune and blood	Benign neoplasm of breast	0.98	0.78 - 1.22	0.84	0.93
L02	Skin and subcutaneous tissue	Cutaneous abscess, furuncle and carbuncle	0.97	0.70 - 1.35	0.85	0.94
G91	Nervous system	Hydrocephalus	0.96	0.63 - 1.48	0.86	0.94
I69	Circulatory	Sequelae of cerebrovascular disease	0.96	0.62 - 1.50	0.86	0.94
J11	Respiratory	Influenza due to unidentified influenza virus	0.96	0.62 - 1.49	0.86	0.94
N90	Genitourinary	Other noninflammatory disorders of vulva and perineum	0.96	0.59 - 1.56	0.86	0.94

D28	Immune and blood	Benign neoplasm of other and unspecified female genital organs	0.94	0.50 - 1.79	0.86	0.94
H10	Eye, ear and adnexa	Conjunctivitis	1.04	0.65 - 1.67	0.88	0.94
G60	Nervous system	Hereditary and idiopathic neuropathy	0.99	0.88 - 1.12	0.87	0.94
R20	Signs and symptoms	Disturbances of skin sensation	1.01	0.89 - 1.15	0.87	0.94
H35	Eye, ear and adnexa	Retinal disorders	1.02	0.76 - 1.38	0.87	0.94
R51	Signs and symptoms	Headache	1.01	0.90 - 1.13	0.87	0.94
A49	Infectious Diseases	Bacterial infection of unspecified site	1.05	0.55 - 2.02	0.88	0.94
F40	Mental and behavioral	Phobic anxiety disorders	1.03	0.70 - 1.51	0.88	0.95
D89	Immune and blood	Other disorders involving the immune mechanism, not elsewhere classified	0.99	0.82 - 1.19	0.89	0.96
R29	Signs and symptoms	Other symptoms and signs involving the nervous and musculoskeletal systems	1.02	0.75 - 1.39	0.90	0.96
L71	Skin and subcutaneous tissue	Rosacea	0.98	0.70 - 1.37	0.90	0.96
K40	Digestive	Inguinal hernia	1.03	0.67 - 1.59	0.90	0.96
J20	Respiratory	Acute bronchitis	1.04	0.59 - 1.84	0.90	0.96
B07	Infectious Diseases	Viral warts	1.04	0.59 - 1.84	0.90	0.96
K91	Digestive	Intraoperative and postprocedural complications and disorders of digestive system, not elsewhere classified	0.98	0.68 - 1.42	0.91	0.96
695	Skin and subcutaneous tissue	Erythematous conditions	1.01	0.85 - 1.20	0.91	0.96
I86	Circulatory	Varicose veins of other sites	1.03	0.59 - 1.80	0.91	0.96
L72	Skin and subcutaneous tissue	Follicular cysts of skin and sub	1.02	0.68 - 1.54	0.92	0.96
N94	Genitourinary	Pain and other conditions associated with female genital organs and menstrual cycle	0.99	0.82 - 1.20	0.93	0.97
D56	Immune and blood	Thalassaemia	0.98	0.62 - 1.55	0.93	0.97
I84	Circulatory	Haemorrhoids	1.01	0.84 - 1.22	0.93	0.97
R43	Signs and symptoms	Disturbances of smell and taste	0.99	0.81 - 1.21	0.93	0.97
J35	Respiratory	Chronic diseases of tonsils and	0.98	0.59 - 1.62	0.93	0.97
M17	Musculoskeletal	Gonarthrosis arthrosis of knee	1.01	0.74 - 1.39	0.94	0.97
F51	Mental and behavioral	Nonorganic sleep disorders	0.98	0.56 - 1.70	0.94	0.97
I07	Circulatory	Rheumatic tricuspid valve disease	0.98	0.56 - 1.70	0.94	0.97
N13	Genitourinary	Obstructive and reflux uropathy	0.99	0.83 - 1.19	0.95	0.97
K45	Digestive	Other abdominal hernia	0.99	0.78 - 1.26	0.95	0.97
E23	Endocrine and metabolic	Hypofunction and other disorders	1.01	0.71 - 1.45	0.95	0.97
578	Digestive	Gastrointestinal hemorrhage	0.99	0.70 - 1.40	0.95	0.97
J21	Respiratory	Acute bronchiolitis	0.98	0.53 - 1.82	0.94	0.97
D12	Immune and blood	Benign neoplasm of colon rectum	1.01	0.75 - 1.36	0.95	0.98
B25	Infectious Diseases	Cytomegaloviral disease	0.99	0.69 - 1.43	0.96	0.98
I80	Circulatory	Phlebitis and thrombophlebitis	1.01	0.75 - 1.35	0.96	0.98
E03	Endocrine and metabolic	Other hypothyroidism	1.00	0.92 - 1.09	0.97	0.98
R01	Signs and symptoms	Cardiac murmurs and other cardiac sounds	0.99	0.73 - 1.36	0.97	0.98
L80	Skin and subcutaneous tissue	Vitiligo	1.01	0.54 - 1.89	0.97	0.98

M72	Musculoskeletal	Fibroblastic disorders	1.01	0.55 - 1.85	0.97	0.99
M19	Musculoskeletal	Other arthrosis	1.00	0.88 - 1.14	0.99	1.00
E74	Endocrine and metabolic	Other disorders of carbohydrate	1.00	0.59 - 1.70	0.99	1.00
I15	Circulatory	Secondary hypertension	1.00	0.62 - 1.60	0.99	1.00
I67	Circulatory	Other cerebrovascular diseases	1.00	0.62 - 1.62	0.99	1.00
R27	Signs and symptoms	Other lack of coordination	1.00	0.61 - 1.65	1.00	1.00

*Unadjusted P values were calculated via univariable logistic regression.

†P values were corrected using the Benjamini-Hochberg false discovery rate (FDR) method

Supplementary Table 4. Diagnoses with significant associations with BAT after multivariable logistic regression analysis.

Diagnosis	ICD code	OR	95% CI	Unadjusted P value*	FDR adjusted P value†
Non-insulin dependent diabetes mellitus	E11	0.42	0.35 - 0.50	<0.001	<0.001
Chronic ischemic heart disease	I25	0.53	0.44 - 0.62	<0.001	<0.001
Respiratory failure not elsewhere classified	J96	0.46	0.37 - 0.57	<0.001	<0.001
Ascites	R18	0.51	0.43 - 0.62	<0.001	<0.001
Unspecified diabetes mellitus	E14	0.47	0.38 - 0.58	<0.001	<0.001
Other functional intestinal disorders	K59	0.80	0.75 - 0.85	<0.001	<0.001
Other anxiety disorders	F41	0.78	0.73 - 0.84	<0.001	<0.001
Depressive episode	F32	0.68	0.61 - 0.76	<0.001	<0.001
Disorders of lipoprotein metabolism	E78	0.76	0.70 - 0.83	<0.001	<0.001
Dorsalgia	M54	0.74	0.67 - 0.81	<0.001	<0.001
Nausea and vomiting	R11	0.79	0.74 - 0.85	<0.001	<0.001
Other disorders of fluid, electrolyte and acid-base balance	E87	0.77	0.71 - 0.83	<0.001	<0.001
Essential primary hypertension	I10	0.79	0.73 - 0.85	<0.001	<0.001
Pleural effusion not elsewhere classified	J90	0.71	0.64 - 0.79	<0.001	<0.001
Disorders of mineral metabolism	E83	0.76	0.70 - 0.83	<0.001	<0.001
Malaise and fatigue	R53	0.80	0.74 - 0.87	<0.001	<0.001
Sleep disorders	G47	0.77	0.71 - 0.85	<0.001	<0.001
Lack of expected normal physiological development in childhood and adults	R62	0.55	0.45 - 0.69	<0.001	<0.001
Pneumonia, unspecified organism	J18	0.67	0.58 - 0.78	<0.001	<0.001
Gastro-esophageal reflux disease	K21	0.80	0.74 - 0.87	<0.001	<0.001
Reaction to severe stress, and adjustment disorders	F43	0.74	0.66 - 0.82	<0.001	<0.001
Other respiratory disorders	J98	0.77	0.70 - 0.85	<0.001	<0.001
Other septicaemia	A41	0.64	0.54 - 0.76	<0.001	<0.001
Volume depletion	E86	0.74	0.66 - 0.83	<0.001	<0.001
Pleural effusion in conditions classified elsewhere	J91	0.58	0.47 - 0.72	<0.001	<0.001
Hepatomegaly and splenomegaly, not elsewhere classified	R16	0.47	0.35 - 0.63	<0.001	<0.001
Other anemias	D64	0.84	0.78 - 0.90	<0.001	<0.001
Abnormalities of breathing	R06	0.78	0.71 - 0.86	<0.001	<0.001
Other diseases of pericardium	I31	0.64	0.53 - 0.76	<0.001	<0.001
Purpura and other hemorrhagic conditions	D69	0.79	0.72 - 0.87	<0.001	<0.001
Abdominal and pelvic pain	R10	0.79	0.71 - 0.87	<0.001	<0.001
Acute renal failure	N17	0.73	0.64 - 0.83	<0.001	<0.001
Heart failure	I50	0.54	0.42 - 0.70	<0.001	<0.001
Other coagulation defects	D68	0.64	0.53 - 0.77	<0.001	<0.001
Atrial fibrillation and flutter	I48	0.60	0.48 - 0.75	<0.001	<0.001
Pneumonitis due to solids and liquids	J69	0.46	0.33 - 0.64	<0.001	<0.001
Hypotension	I95	0.79	0.72 - 0.87	<0.001	<0.001

Other metabolic disorders	E88	0.74	0.66 - 0.84	<0.001	<0.001
Cachexia	R64	0.60	0.48 - 0.75	<0.001	<0.001
Abnormalities of heart beat	R00	0.81	0.73 - 0.89	<0.001	<0.001
Recurrent depressive disorder	F33	0.74	0.64 - 0.85	<0.001	<0.001
Anemia in chronic diseases classified elsewhere	D63	0.72	0.62 - 0.84	<0.001	<0.001
Disorders of continuity of bone	M84	0.63	0.51 - 0.78	<0.001	<0.001
Pain in throat and chest	R07	0.78	0.70 - 0.88	<0.001	<0.001
Other pulmonary heart diseases	I27	0.55	0.42 - 0.73	<0.001	<0.001
Other venous embolism and thrombosis	I82	0.77	0.68 - 0.87	<0.001	<0.001
Pain not elsewhere classified	R52	0.82	0.74 - 0.90	<0.001	<0.001
Asthma	J45	0.79	0.71 - 0.88	<0.001	<0.001
Paroxysmal tachycardia	I47	0.53	0.39 - 0.72	<0.001	<0.001
Flatulence and related condition	R14	0.68	0.56 - 0.82	<0.001	<0.001
Shock not elsewhere classified	R57	0.42	0.28 - 0.65	<0.001	<0.001
Diverticular disease of intestine	K57	0.74	0.63 - 0.86	<0.001	<0.001
Elevated blood glucose level	R73	0.69	0.57 - 0.84	<0.001	<0.001
Abnormal serum enzyme levels	R74	0.75	0.64 - 0.87	<0.001	<0.001
Pulmonary embolism	I26	0.73	0.62 - 0.86	<0.001	0.001
Unspecified severe protein-calorie malnutrition	E43	0.66	0.52 - 0.83	<0.001	0.001
Other disorders of pancreatic internal secretion	E16	0.57	0.42 - 0.78	<0.001	0.001
Acute myocardial infarction	I21	0.27	0.13 - 0.57	0.001	0.001
Other disorders of teeth and supporting structures	K08	1.65	1.23 - 2.20	0.001	0.001
Dysphagia	R13	0.76	0.65 - 0.89	0.001	0.001
Chronic renal failure	N18	0.74	0.62 - 0.88	0.001	0.001
Other disorders of veins	I87	0.56	0.40 - 0.79	0.001	0.002
Diseases of spleen	D73	0.43	0.26 - 0.71	0.001	0.002
Other hereditary hemolytic anemia	D58	0.41	0.24 - 0.70	0.001	0.002
Mental and behavioral disorders due to alcohol use	F10	0.56	0.40 - 0.80	0.001	0.002
Delirium not induced by alcohol	F05	0.56	0.39 - 0.80	0.001	0.002
Bacterial pneumonia not elsewhere classified	J15	0.63	0.47 - 0.83	0.001	0.002
Other acute ischaemic heart disease	I24	0.38	0.21 - 0.69	0.001	0.002
Other specified bacterial agents as the cause of diseases classified elsewhere	B96	0.72	0.59 - 0.88	0.002	0.002
Diseases of vocal cords and larynx	J38	0.62	0.46 - 0.84	0.002	0.003
Diseases of sebaceous glands	706	1.42	1.13 - 1.79	0.003	0.004
Protein-calorie malnutrition of moderate and mild degree	E44	0.64	0.47 - 0.86	0.003	0.004
Hyperkinetic disorders	F90	0.62	0.45 - 0.85	0.003	0.004
Old myocardial infarction	412	0.44	0.26 - 0.76	0.004	0.005
Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction	I65	0.48	0.29 - 0.79	0.004	0.005
Retention of urine	R33	0.70	0.54 - 0.89	0.004	0.005
Sarcoidosis	D86	0.49	0.30 - 0.80	0.004	0.005
Other diseases of liver	K76	0.82	0.72 - 0.94	0.004	0.005
Hypertensive heart disease	I11	0.60	0.42 - 0.85	0.004	0.006
Other mononeuropathies	G58	0.39	0.21 - 0.75	0.005	0.006

Acquired haemolytic anaemia	D59	0.46	0.27 - 0.79	0.005	0.006
Multiple valve diseases	I08	0.32	0.14 - 0.71	0.005	0.007
Anuria and oliguria	R34	0.28	0.11 - 0.71	0.008	0.010
Diseases of pulp and periapical tissues	K04	0.39	0.20 - 0.79	0.008	0.011
Other peripheral vascular diseases	I73	0.72	0.56 - 0.92	0.009	0.011
Obesity	E66	0.79	0.66 - 0.94	0.009	0.011
Portal vein thrombosis	I81	0.55	0.35 - 0.87	0.01	0.01
Other diseases of stomach and duodenum	K31	0.75	0.59 - 0.94	0.01	0.02
Calculus of kidney and ureter	N20	0.74	0.58 - 0.94	0.01	0.02
Acute and transient psychotic disorders	F23	0.61	0.41 - 0.92	0.02	0.02
Other diseases of biliary tract	K83	0.71	0.53 - 0.94	0.02	0.02
Paralytic ileus and intestinal obstruction without hernia	K56	0.81	0.68 - 0.97	0.02	0.02
Other disorders of pigmentation	L81	1.22	1.03 - 1.45	0.02	0.02
Other epidermal thickening	L85	1.20	1.03 - 1.40	0.02	0.03
Other dorsopathies not elsewhere classified	M53	0.88	0.79 - 0.98	0.03	0.03
Other nonscarring hair loss	L65	1.16	1.01 - 1.32	0.03	0.03
Mental and behavioral disorders due to tobacco use	F17	0.85	0.74 - 0.98	0.03	0.03
Postprocedural respiratory disorders	J95	0.77	0.60 - 0.99	0.04	0.05
Other cardiac arrhythmias	I49	0.88	0.78 - 1.00	0.05	0.05
Menopausal and other perimenopausal disorders	N95	1.15	0.99 - 1.35	0.07	0.07
Abuse of non-psychoactive substances	F55	0.86	0.72 - 1.03	0.10	0.10
Other disorders of skin and subcutaneous tissue related to radiation	L59	1.19	0.93 - 1.52	0.16	0.16
Osteoporosis without pathological fracture	M81	1.13	0.95 - 1.34	0.16	0.16
Other noninfective disorders of lymphatic vessels and lymph nodes	I89	1.10	0.96 - 1.27	0.18	0.18

*Unadjusted P values were calculated via multivariable logistic regression adjusting for age, sex, BMI, ambient temperature, self-reported race and ethnicity, smoking history, family history of cardiovascular disease, cancer site, cancer stage, cancer treatment, and general groups of outpatient medications

†P values were corrected using the Benjamini-Hochberg false discovery rate (FDR) method

Supplementary Table 5. Laboratory values, clinical indices, and imaging studies in BAT+ and BAT- patients from a propensity score-matched cohort.

Parameter	Unadjusted					Adjusted*			
	BAT- (N=17,405)		BAT+ (N=8,897)		p value [†]	BAT- (N=17,405)	BAT+ (N=8,897)	β estimate (SE) [‡]	p value [§]
	No. of subjects (% of total patients)	Mean level (SE)	No. of subjects (% of total patients)	Mean level (SE)		Least-squares mean (SE)	Least-squares mean (SE)		
Laboratory values									
Cardiometabolic parameters [¶]									
Glucose (mg/dL)	17,338 (99.6)	95.51 (0.16)	8,877 (99.8)	91.73 (0.18)	<0.001	111.36 (0.87)	108.13 (0.87)	-3.23 (0.25)	<0.001
HbA1c (%)	2,036 (11.7)	5.93 (0.03)	841 (9.5)	5.65 (0.04)	<0.001	6.50 (0.14)	6.27 (0.14)	-0.23 (0.05)	<0.001
Triglycerides (mg/dL)	1,996 (11.5)	153.70 (4.51)	995 (11.2)	120.20 (3.16)	<0.001	201.87 (19.03)	164.23 (18.93)	-37.64 (6.89)	<0.001
Total cholesterol (mg/dL)	1,746 (10.0)	185.80 (1.33)	900 (10.1)	191.20 (1.67)	0.01	183.99 (6.22)	189.98 (6.17)	5.99 (2.23)	0.007
LDL cholesterol (mg/dL)	1,568 (9.0)	110.4 (1.01)	818 (9.2)	114.7 (1.28)	0.009	109.71 (4.70)	113.77 (4.70)	4.06 (1.69)	0.02
HDL cholesterol (mg/dL)	1,587 (9.1)	50.78 (0.44)	828 (9.3)	55.78 (0.61)	<0.001	46.40 (2.00)	52.55 (1.99)	6.14 (0.72)	<0.001
Remnant cholesterol (mg/dL)	1,558 (8.9)	27.80 (0.56)	815 (9.2)	22.65 (0.57)	<0.001	28.69 (2.57)	23.34 (2.57)	-5.35 (0.88)	<0.001
Liver function tests									
AST (U/L)	15,506 (89.1)	27.33 (0.25)	8,078 (90.8)	25.30 (0.27)	<0.001	31.54 (1.25)	29.53 (1.24)	-2.01 (0.40)	<0.001
ALT (U/L)	15,509 (89.1)	28.02 (0.34)	8,082 (90.8)	25.71 (0.31)	<0.001	34.13 (1.64)	31.86 (1.62)	-2.27 (0.52)	<0.001
ALK (U/L)	15,512 (89.1)	98.88 (0.87)	8,082 (90.8)	87.92 (0.77)	<0.001	132.97 (4.43)	122.22 (4.39)	-10.36 (1.31)	<0.001
Albumin (g/dL)	15,549 (89.3)	4.12 (0.01)	8,099 (91.0)	4.21 (0.01)	<0.001	3.85 (0.06)	3.95 (0.06)	0.10 (0.02)	<0.001
Bilirubin (mg/dL)	15,508 (89.1)	0.53 (0.004)	8,080 (90.8)	0.51 (0.004)	0.007	0.51 (0.02)	0.50 (0.02)	-0.01 (0.006)	0.71
Complete blood counts [¶]									
White-cell count (per mm ³)	14,986 (86.1)	7.43 (0.16)	7,867 (88.4)	6.76 (0.38)	0.10	5.04 (1.25)	4.58 (1.23)	-0.46 (0.35)	0.20
Neutrophils (per mm ³)	14,874 (85.5)	4.88 (0.03)	7,827 (88.0)	4.18 (0.03)	<0.001	3.73 (0.16)	3.12 (0.16)	-0.61 (0.04)	<0.001
Lymphocytes (per mm ³)	14,584 (83.8)	1.56 (0.03)	7,681 (86.3)	1.45 (0.03)	0.001	1.02 (0.15)	0.97 (0.15)	-0.05 (0.04)	0.20
Platelets (per mm ³)	14,985 (86.1)	258.30 (0.80)	7,867 (88.4)	246.40 (0.96)	<0.001	215.34 (4.57)	204.52 (4.52)	-10.86 (1.30)	<0.001
Hemoglobin (g/dL)	14,992 (86.1)	12.34 (0.01)	7,869 (88.4)	12.38 (0.01)	0.08	10.92 (0.08)	11.07 (0.08)	0.15 (0.02)	<0.001
Inflammation markers [¶]									
ESR (mm/h)	1,774 (10.2)	35.33 (0.76)	1,021 (11.5)	28.09 (0.88)	<0.001	38.67 (3.70)	34.43 (3.60)	-4.24 (1.21)	<0.001
C-reactive protein (mg/L)	1,388 (8.0)	3.55 (0.17)	638 (7.2)	3.33 (0.24)	0.47	5.15 (0.87)	4.62 (0.85)	-0.55 (0.30)	0.08
Cardiac biomarkers									
BNP (pg/mL)	1,887 (10.8)	154.00 (8.80)	737 (8.3)	112.10 (11.58)	0.004	221.50 (58.48)	185.83 (58.65)	-35.66 (15.80)	0.02
Renal function									
Creatinine (mg/dL)	15,818 (90.9)	0.84 (0.003)	8,233 (92.5)	0.84 (0.003)	0.53	0.89 (0.02)	0.89 (0.02)	<0.001 (0.001)	0.99
BUN (mg/dL)	15,786 (90.7)	14.67 (0.05)	8,210 (92.3)	14.50 (0.07)	0.06	14.71 (0.28)	14.73 (0.28)	0.02 (0.08)	0.78

Endocrine									
C-peptide (ng/mL)	210 (1.2)	3.12 (0.18)	56 (0.6)	2.53 (0.34)	0.13	3.53 (1.07)	2.92 (1.05)	-0.60 (0.42)	0.15
TSH (mIU/L)**	5,792 (33.3)	2.66 (0.09)	3,014 (33.9)	2.95 (0.17)	0.14	5.13 (0.58)	5.32 (0.60)	0.19 (0.18)	0.29
Clinical indices									
Triglyceride-glucose index††	1,996 (11.5)	4.68 (0.01)	995 (11.2)	4.57 (0.01)	<0.001	4.79 (0.04)	4.67 (0.04)	-0.12 (0.06)	<0.001
Neutrophil-to-lymphocyte ratio‡	14,575 (83.7)	4.72 (0.07)	7,670 (86.2)	4.02 (0.06)	<0.001	5.74 (0.38)	4.96 (0.37)	-0.78 (0.11)	<0.001
FIB-4 index‡‡	15,456 (88.8)	1.45 (0.44)	8,053 (90.5)	1.27 (0.03)	<0.001	2.34 (0.22)	2.18 (0.22)	-0.16 (0.07)	0.02
Echocardiographic parameters§§									
Left ventricle mass index (g/m ²)	3,289 (18.9)	72.51 (0.33)	1,733 (19.5)	70.30 (0.43)	<0.001	84.98 (2.37)	82.72 (2.34)	-2.26 (0.53)	<0.001
Left atrium volume index (mL/m ²)	3,085 (17.7)	23.03 (8.08)	1,651 (18.6)	22.63 (7.1)	0.08	31.18 (1.04)	30.84 (1.03)	-0.34 (0.23)	0.14
Mitral valve E/A	3,052 (17.5)	1.17 (0.41)	1,645 (18.5)	1.20 (0.45)	0.02	1.21 (0.05)	1.22 (0.05)	0.01 (0.01)	0.28
Mitral valve E/e'	3,000 (17.2)	7.08 (2.96)	1,627 (18.3)	6.76 (2.51)	<0.001	6.75 (0.38)	6.55 (0.37)	-0.20 (0.08)	<0.001
Relative wall thickness	3,305 (19.0)	0.37 (0.08)	1,743 (19.6)	0.36 (0.07)	<0.001	0.37 (0.01)	0.36 (0.01)	0.01 (0.002)	<0.001
Left ventricle posterior wall diameter (cm)	3,305 (19.0)	0.81 (0.002)	1,743 (19.6)	0.79 (0.003)	<0.001	0.86 (0.02)	0.84 (0.02)	-0.02 (0.004)	<0.001
Pulmonary artery systolic pressure (mmHg)	1,398 (8.0)	26.88 (0.23)	779 (8.8)	25.66 (0.27)	<0.001	31.47 (1.40)	30.54 (1.39)	-0.93 (0.35)	0.007
Ejection fraction (%)¶¶	3,234 (18.6)	64.15 (0.12)	1,715 (19.3)	63.68 (0.15)	0.01	58.58 (0.92)	58.41 (0.90)	-0.17 (0.20)	0.39
Dual-energy X-ray absorptiometry scan									
t-score vertebrae	911 (5.2)	-0.62 (0.05)	468 (5.3)	-0.79 (0.07)	0.04	-0.29 (0.45)	-0.53 (0.45)	-0.24 (0.08)	0.003
t-score femoral neck	914 (5.3)	-0.99 (0.03)	470 (5.3)	-0.97 (0.05)	0.65	0.02 (0.29)	-0.04 (0.29)	-0.06 (0.05)	0.27
t-score total hip	911 (5.2)	-0.68 (0.04)	468 (5.3)	-0.68 (0.05)	0.96	-0.07 (0.32)	-0.14 (0.32)	-0.07 (0.06)	0.24

*Least-squares means were estimated using a general linear model (GLM), adjusted for prespecified core covariates: age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, cancer treatment, and medication intake for specific parameters indicated.

†P values were calculated using an unpaired two-tailed t-test, with variance equality assessed via an F-test of sample variances. When variances were equal, standard t-tests assuming equal variances were used; otherwise, t-tests with unequal variance adjustments were applied.

‡Estimate effects represent least-squares mean difference between BAT+ and BAT- group.

§P values for the adjusted analyses were derived from the GLM using *post hoc* two-tailed pairwise comparisons with Tukey's honestly significant difference (HSD) method.

¶Glucose and HbA1c least-squares means were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment) and antidiabetic medication intake. Triglycerides, total cholesterol, LDL cholesterol, HDL cholesterol, and remnant cholesterol were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment) and lipid-lowering medications.

||Patients with hematological malignancies were excluded from complete blood count, inflammation markers, and neutrophil-to-lymphocyte ratio analyses.

**TSH least-squares means were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment) and thyroid hormone replacement therapy. Patients with thyroid cancer were excluded from the analysis.

††Triglycerides-glucose index (TyG index), a surrogate marker of insulin resistance, was calculated as the natural logarithm of the product of triglycerides (mg/dL) and glucose (mg/dL) divided by two. least-squares means were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment), antidiabetic medication and lipid-lowering medication intake.

‡‡FIB-4 index, a validated noninvasive score for liver fibrosis, was calculated as age (years) multiplied by AST (U/L), divided by the product of platelet count (10⁹/L) and the square root of ALT (U/L).

§§Echocardiographic parameters least-squares means were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment), antihypertensive and heart failure medication intake.

¶¶Left ventricle ejection fraction was measured by the US 2D modified biplane method.

||||Dual-energy X-ray absorptiometry scan least-squares means were adjusted for core covariates (age, sex, body mass index, race, ethnicity, ambient temperature, cancer site, cancer stage, and cancer treatment) and osteoporosis therapy.

Supplementary Table 6. Medications tested for associations with BAT in multivariable regression analysis.

Medication	OR	95% CI	Unadjusted P value*	FDR adjusted P value†
Letrozole	1.91	1.61 - 2.27	<0.001	<0.001
Pantoprazole	1.38	1.24 - 1.54	<0.001	<0.001
Hydrochlorothiazide	1.58	1.35 - 1.86	<0.001	<0.001
Filgrastim	2.41	1.77 - 3.29	<0.001	<0.001
Cholecalciferol	1.23	1.14 - 1.34	<0.001	<0.001
Ergocalciferol	1.39	1.22 - 1.59	<0.001	<0.001
Fluoxetine	0.33	0.21 - 0.51	<0.001	<0.001
Amlodipine	1.40	1.22 - 1.60	<0.001	<0.001
Aspirin	1.33	1.18 - 1.50	<0.001	<0.001
Escitalopram	0.60	0.48 - 0.75	<0.001	<0.001
Leuprolide	2.00	1.48 - 2.71	<0.001	<0.001
Lisinopril	1.57	1.28 - 1.92	<0.001	<0.001
Bupropion	0.53	0.40 - 0.71	<0.001	<0.001
Atenolol	0.42	0.27 - 0.64	<0.001	<0.001
Sertraline	0.57	0.44 - 0.75	<0.001	<0.001
Enoxaparin	1.49	1.22 - 1.82	<0.001	0.001
Dexamethasone	1.22	1.10 - 1.36	<0.001	0.001
Amphetamine dextroamphetamine	0.39	0.24 - 0.66	<0.001	0.003
Losartan	1.36	1.13 - 1.63	0.001	0.006
Oxybutynin	2.04	1.34 - 3.11	0.001	0.006
Denosumab	1.71	1.24 - 2.35	0.001	0.006
Baclofen	1.75	1.25 - 2.46	0.001	0.006
Metformin	0.70	0.56 - 0.87	0.002	0.008
Capecitabine	1.53	1.17 - 2.00	0.002	0.009
Venlafaxine	0.63	0.47 - 0.85	0.002	0.012
Olanzapine	1.29	1.09 - 1.53	0.003	0.014
Osimertinib	1.78	1.22 - 2.61	0.003	0.014
Clopidogrel	1.72	1.20 - 2.46	0.003	0.014
Atorvastatin	1.24	1.07 - 1.43	0.003	0.014
Valsartan	1.52	1.14 - 2.02	0.004	0.016
Propranolol	0.38	0.20 - 0.74	0.004	0.018
Lenalidomide	1.75	1.19 - 2.59	0.005	0.019
Rivaroxaban	1.36	1.09 - 1.70	0.006	0.023
Ranitidine	1.37	1.09 - 1.73	0.007	0.025
Simvastatin	1.36	1.08 - 1.71	0.009	0.034
Citalopram	0.54	0.34 - 0.88	0.012	0.042
Anastrozole	1.30	1.06 - 1.60	0.013	0.044
Enalapril	1.62	1.10 - 2.37	0.014	0.046
Levetiracetam	1.46	1.08 - 1.97	0.015	0.047

Tiotropium	1.71	1.10 - 2.65	0.017	0.053
Montelukast	0.73	0.57 - 0.95	0.019	0.058
Melatonin	0.75	0.58 - 0.96	0.021	0.062
Paroxetine	0.53	0.31 - 0.91	0.022	0.063
Metoprolol	0.82	0.68 - 0.97	0.025	0.070
Irbesartan	1.75	1.07 - 2.85	0.026	0.071
Alendronate	1.56	1.05 - 2.32	0.027	0.073
Levothyroxine	1.12	1.01 - 1.26	0.040	0.11
Mirabegron	1.88	1.02 - 3.47	0.044	0.11
Zoledronic acid	1.62	1.01 - 2.60	0.045	0.12
Nebivolol	0.58	0.33 - 1.01	0.052	0.13
Folic acid	1.19	0.99 - 1.42	0.057	0.14
Trazodone	0.73	0.52 - 1.02	0.062	0.15
Allopurinol	1.27	0.99 - 1.62	0.061	0.15
Lansoprazole	1.36	0.98 - 1.89	0.063	0.15
Pravastatin	1.40	0.96 - 2.06	0.080	0.18
Erlotinib	1.60	0.94 - 2.74	0.086	0.19
Rosuvastatin	1.18	0.97 - 1.44	0.088	0.19
Glimepiride	0.57	0.29 - 1.11	0.096	0.20
Tamsulosin	0.74	0.52 - 1.05	0.094	0.20
Cyclobenzaprine	1.32	0.95 - 1.83	0.097	0.20
Budesonide	1.47	0.93 - 2.32	0.096	0.20
Ethinyl estradiol	1.22	0.96 - 1.55	0.10	0.20
Spironolactone	0.74	0.51 - 1.07	0.10	0.21
Carvedilol	0.74	0.51 - 1.07	0.11	0.21
Zolpidem	1.16	0.97 - 1.39	0.11	0.21
Diltiazem	1.39	0.92 - 2.08	0.12	0.22
Tizanidine	0.63	0.35 - 1.13	0.12	0.22
Prednisone	1.13	0.97 - 1.33	0.13	0.23
Famotidine	1.16	0.96 - 1.39	0.12	0.23
Amitriptyline	0.63	0.35 - 1.15	0.13	0.23
Quetiapine	0.65	0.37 - 1.14	0.13	0.23
Lamotrigine	0.71	0.46 - 1.10	0.13	0.23
Pegfilgrastim	1.19	0.95 - 1.50	0.13	0.23
Sitagliptin	0.70	0.44 - 1.12	0.14	0.23
Methylphenidate	0.64	0.35 - 1.16	0.14	0.24
Eszopiclone	0.61	0.30 - 1.23	0.17	0.27
Olmesartan	1.33	0.89 - 2.01	0.17	0.27
Estradiol	0.75	0.48 - 1.17	0.21	0.34
Liothyronine	0.67	0.35 - 1.28	0.22	0.35
Tadalafil	0.69	0.37 - 1.27	0.24	0.37
Gabapentin	1.08	0.94 - 1.23	0.27	0.41
Empagliflozin	0.63	0.27 - 1.44	0.27	0.41
Fulvestrant	1.27	0.80 - 2.02	0.32	0.48

Labetalol	0.71	0.35 - 1.44	0.34	0.51
Tacrolimus	0.75	0.39 - 1.41	0.36	0.54
Calcitriol	0.79	0.46 - 1.35	0.39	0.55
Esomeprazole	0.89	0.69 - 1.16	0.41	0.55
Exemestane	1.13	0.84 - 1.53	0.41	0.55
Finasteride	1.21	0.77 - 1.91	0.41	0.55
Methotrexate	1.23	0.75 - 2.02	0.41	0.55
Nifedipine	1.25	0.75 - 2.10	0.39	0.55
Phenazopyridine	1.26	0.73 - 2.19	0.41	0.55
Mesalamine	1.27	0.74 - 2.17	0.39	0.55
Pregabalin	1.12	0.84 - 1.49	0.45	0.59
Ezetimibe	1.17	0.78 - 1.75	0.45	0.60
Methylprednisolone	1.14	0.81 - 1.60	0.46	0.60
Furosemide	1.10	0.84 - 1.45	0.47	0.61
Benazepril	0.85	0.49 - 1.46	0.55	0.69
Warfarin	0.85	0.49 - 1.48	0.57	0.69
Fenofibrate	0.87	0.53 - 1.41	0.57	0.69
Hydroxychloroquine	0.87	0.55 - 1.38	0.56	0.69
Nicotine	0.88	0.56 - 1.37	0.56	0.69
Apixaban	1.08	0.83 - 1.41	0.56	0.69
Chlorthalidone	1.17	0.61 - 2.24	0.64	0.77
Hydralazine	1.17	0.60 - 2.28	0.64	0.77
Omeprazole	1.03	0.91 - 1.16	0.67	0.79
Hydrocortisone	1.13	0.64 - 1.97	0.68	0.79
Salmeterol	0.93	0.66 - 1.31	0.69	0.80
Glipizide	0.90	0.52 - 1.56	0.71	0.81
Fluticasone	1.05	0.81 - 1.35	0.73	0.81
Sildenafil	1.09	0.67 - 1.77	0.72	0.81
Raloxifene	1.12	0.59 - 2.13	0.72	0.81
Ipratropium	1.08	0.67 - 1.75	0.75	0.83
Dicyclomine	0.93	0.52 - 1.68	0.81	0.87
Ramipril	0.93	0.54 - 1.60	0.80	0.87
Albuterol	0.98	0.83 - 1.15	0.80	0.87
Insulin	1.04	0.74 - 1.46	0.81	0.87
Topiramate	0.96	0.58 - 1.59	0.87	0.92
Tamoxifen	1.01	0.84 - 1.23	0.88	0.92
Mirtazapine	0.97	0.65 - 1.45	0.89	0.93
Methadone	0.98	0.62 - 1.57	0.94	0.97
Dexlansoprazole	0.99	0.58 - 1.68	0.96	0.97
Formoterol	0.99	0.71 - 1.39	0.96	0.97
Ursodiol	1.01	0.72 - 1.41	0.95	0.97
Sucralfate	1.00	0.75 - 1.33	0.99	0.99

*Unadjusted P values were calculated via multivariable logistic regression adjusting for age, sex, BMI, ambient temperature, self-reported race and ethnicity, smoking history, family history of cardiovascular disease, cancer site, cancer stage, cancer treatment, and general groups of outpatient medications

†P values were corrected using the Benjamini-Hochberg false discovery rate (FDR) method

Supplementary Table 7. Psychiatric diagnoses and corresponding ICD codes

Diagnosis	Diagnostic codes (ICD-10)
Depression	Depressive episode (F32) Recurrent depressive disorder (F33)
Anxiety	Other anxiety disorders (F41)
Psychosis	Acute and transient psychotic disorder (F23)

Supplementary Table 8. Cardiometabolic diagnoses and corresponding ICD codes.

Diagnosis	ICD-9/ICD-10 codes
Type 2 diabetes	250, 250.02, 250.1, 250.12, 250.2, 250.22, 250.4, 250.42, 250.5, 250.52, 250.6, 250.62, 250.7, 250.72, 250.8, 250.82, 250.9, 250.92 E11.00, E11.10, E11.21, E11.22, E11.29, E11.311, E11.319, E11.3211, E11.3519, E11.3522, E11.3523, E11.3593, E11.3599, E11.36, E11.39, E11.40, E11.41, E11.42, E11.43, E11.44, E11.51, E11.52, E11.610, E11.618, E11.620, E11.621, E11.622, E11.649, E11.65, E11.69, E11.8, E11.9
Dyslipidemia	272, 272.1, 272.2, 272.3, 272.4, 272.5, 272.7, 272.8, 272.9 E78.0, E78.00, E78.01, E78.1, E78.2, E78.3, E78.4, E78.5, E78.6, E78.70, E78.79, E78.89, E78.9, E88.2
Atrial fibrillation/Atrial flutter	427.31, 427.32 I48.0, I48.1, I48.2, I48.3, I48.4, I48.91, I48.92
Coronary artery disease	410, 410.01, 410.11, 410.21, 410.22, 410.3, 410.31, 410.4, 410.41, 410.42, 410.5, 410.51, 410.52, 410.7, 410.71, 410.72, 410.8, 410.81, 410.82, 410.9, 410.91, 410.92, 411, 411.1, 411.81, 411.89, 412, 414, 414.01, 414.02, 414.04, 414.05, 414.2, 414.4, 414.8, 414.9, 429.79 I21.09, I21.19, I21.29, I21.3, I21.4, I21.9, I21.A1, I22.8, I22.9, I23.6, I24.1, I24.8, I24.9, I25.10, I25.110, I25.111, I25.118, I25.119, I25.2, I25.5, I25.6, I25.708, I25.709, I25.810, I25.811, I25.82, I25.83, I25.84, I25.89, I25.9
Cerebrovascular disease	430, 431, 432, 432.1, 432.9, 433.1, 433.11, 433.2, 433.3, 433.31, 433.8, 433.9, 434, 434.01, 434.1, 434.11, 434.9, 434.91, 435.1, 435.2, 435.8, 435.9, 436, 437, 437.1, 437.2, 437.3, 437.4, 437.6, 437.7, 437.8, 437.9, 438, 438.1, 438.11, 438.12, 438.13, 438.19, 438.2, 438.21, 438.22, 438.3, 438.5, 438.51, 438.52, 438.6, 438.7, 438.81, 438.82, 438.83, 438.84, 438.85, 438.89, 438.9 I60.00, I60.8, I60.9, I61.1, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I62.00, I62.01, I62.02, I62.03, I62.9, I63.02, I63.10, I63.132, I63.212, I63.231, I63.312, I63.39, I63.40, I63.411, I63.412, I63.421, I63.422, I63.443, I63.449, I63.49, I63.50, I63.511, I63.512, I63.519, I63.533, I63.543, I63.549, I63.6, I63.8, I63.89, I63.9, I65.01, I65.02, I65.09, I65.1, I65.21, I65.22, I65.23, I65.29, I65.8, I66.02, I66.21, I66.22, I66.9, I67.1, I67.2, I67.4, I67.5, I67.6, I67.82, I67.83, I67.848, I67.89, I67.9, I68.0, I68.8, I69.00, I69.098, I69.11, I69.120, I69.122, I69.151, I69.154, I69.161, I69.192, I69.198, I69.220, I69.251, I69.254, I69.30, I69.31, I69.311, I69.312, I69.320, I69.322, I69.328, I69.331, I69.334, I69.339, I69.351, I69.352, I69.353, I69.354, I69.359, I69.361, I69.364, I69.365, I69.369, I69.391, I69.392, I69.393, I69.398, I69.80, I69.81, I69.811, I69.820, I69.822, I69.828, I69.831, I69.834, I69.851, I69.854, I69.859, I69.892, I69.898, I69.920, I69.922, I69.928, I69.931, I69.951, I69.954, I69.959, I69.969, I69.992, I69.998
Congestive heart failure	428, 428.1, 428.2, 428.21, 428.22, 428.23, 428.3, 428.31, 428.32, 428.33, 428.4, 428.41, 428.42, 428.43, 428.9 I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.810, I50.82, I50.89, I50.9
Hypertension	401, 401.1, 401.9, 402, 402.01, 402.9, 402.91 I10, I11.0, I11.9, I12.0, I12.9, I13.0, I13.10, I13.11, I13.2, I16.0, I16.1, I16.9

Supplementary Table 9. Individual medications and general groupings.

Medication Group	Individual Medications
Diabetes medications	Metformin, Insulin, Sitagliptin, Glimepiride, Glipizide, Empagliflozin
Anti-hypertensives	Metoprolol, Carvedilol, Nebivolol, Atenolol, Labetalol, Lisinopril, Enalapril, Ramipril, Benazepril, Losartan, Valsartan, Irbesartan, Olmesartan, Amlodipine, Nifedipine, Diltiazem, Hydrochlorothiazide, Chlorthalidone, Furosemide, Spironolactone, Hydralazine
Hyperlipidemia medication	Atorvastatin, Rosuvastatin, Pravastatin, Simvastatin, Ezetimibe, Fenofibrate
Anticoagulant/Anti-platelet	Aspirin, Enoxaparin, Clopidogrel, Rivaroxaban, Warfarin, Apixaban
Antidepressants	Fluoxetine, Escitalopram, Bupropion, Sertraline, Venlafaxine, Citalopram, Paroxetine, Amitriptyline, Mirtazapine, Trazodone
Anti-inflammatory / immune modulators	Dexamethasone, Allopurinol, Prednisone, Tacrolimus, Methotrexate, Mesalamine, Methylprednisolone, Hydroxychloroquine, Hydrocortisone
Anti-seizure medications	Levetiracetam, Lamotrigine, Gabapentin, Pregabalin, Topiramate
Antipsychotics	Olanzapine, Quetiapine
Bladder/prostate motility	Oxybutynin, Mirabegron, Tamsulosin, Finasteride, Phenazopyridine
Hormone modulators	Letrozole, Leuprolide, Anastrozole, Levothyroxine, Ethinyl estradiol, Estradiol, Liothyronine, Fulvestrant, Exemestane, Raloxifene, Tamoxifen
Inhaled asthma/COPD medications	Tiotropium, Budesonide, Salmeterol, Fluticasone, Ipratropium, Albuterol, Formoterol
Kinase inhibitors	Osimertinib, Erlotinib
Analgesic/muscle relaxant	Baclofen, Cyclobenzaprine, Tizanidine, Methadone
Osteoporosis Therapy	Denosumab, Zoledronic acid, Alendronate
Gastrointestinal modulators	Pantoprazole, Ranitidine, Lansoprazole, Famotidine, Esomeprazole, Omeprazole, Dicyclomine, Dexlansoprazole, Ursodiol, Sucralfate
Medications for sexual dysfunction	Sildenafil, Tadalafil
Sleep modulators	Amphetamine, Melatonin, Zolpidem, Methylphenidate, Eszopiclone
Vitamins	Cholecalciferol, Ergocalciferol, Calcitriol, Folic acid
Oral antineoplastic	Capecitabine, Lenalidomide
Bone marrow stimulants	Filgrastim, Pegfilgrastim
Allergy	Montelukast
Smoking Cessation	Nicotine

Supplementary Table 10. Primer sequences for quantitative PCR

Target	Forward primer	Reverse primer
<i>Ppib</i>	GGAGATGGCACAGGAGGAA	GCCCGTAGTGCTTCAGCTT
<i>Ucp1</i>	ACTGCCACACCTCCAGTCATT	CTTTGCCTCACTCAGGATTGG
<i>Pgc1α</i>	CCCTGCCATTGTTAAGACC	TGCTGCTGTTCTGTTTTTC
<i>Dio2</i>	CAGTGTGGTGCACGTCTCCAATC	TGAACCAAAGTTGACCACCAG
<i>Elovl3</i>	GGACCTGATGCAACCCTATGA	TCCGCGTTCTCATGTAGGTCT
<i>Cidea</i>	GCCGTGTTAAGGAATCTGCTG	TGCTCTTCTGTATCGCCCAGT
<i>Eva1</i>	TTGATGGTCTGGTTGGGACG	AGCTTCTCGAAGTGTTAGTCTGT
<i>PPPRα</i>	GTGTTTCGCAGCTGTTTTGGGG	GGACTTTCCAGGTCATCTGCC
<i>Prdm16</i>	CAGCACGGTGAAGCCATTC	GCGTGCATCCGCTTGTG
<i>aP2</i>	ACACCGAGATTTCTTCAAAGT	CCATCTAGGGTTATGATGCTCTTCA
<i>PPARγ</i>	GCAATGGTGCCTTCGCTGA	TGGCATCTCTGTGTCAACCAT
<i>Adipoq</i>	GCACTGGCAAGTTCTACTGCA	GTAGGTGAAGAGAACGGCCTTGT
<i>At1r</i>	AACAGCTTGGTGGTGATCGTC	CATAGCGGTATAGACAGCCCA