

**Supplemental Table 1. Overview of the source of cancer data.**

	<b>GWAS ID</b>	<b>Year</b>	<b>Trait</b>	<b>Consortium</b>	<b>Sample size</b>	<b>Case</b>	<b>Control</b>	<b>Number of SNPs</b>	<b>Population</b>
<b>Lung cancer</b>	finn-b-C3_NSCLC_SQUAM_EXALLC	2021	Squamous cell lung cancer	NA	174,369	365	174,004	16380303	European
	finn-b-C3_NSCLC_SQUAM	2021	Squamous cell lung cancer	NA	218,792	365	218,427	16380466	European
	ieu-a-967	2014	Squamous cell lung cancer	ILCCO	18313	3275	15,038	8893750	European
	finn-b-C3_SCLC_EXALLC	2021	Small cell lung cancer	FINNGEN	174,185	179	174,006	16380303	European
	finn-b-C3_SCLC	2021	Small cell lung cancer	FINNGEN	218,792	179	218,613	16380466	European
	finn-b-C3_LUNG_NONSMALL	2021	Non-small cell lung cancer	FINNGEN	218,792	1627	217,165	16380466	European
	finn-b-C3_LUNG_NONSMALL_EXALLC	2021	Non-small cell lung cancer	FINNGEN	175,633	1627	174,006	16380305	European
	ukb-d-LUNG_CANCER_MESOT	2018	Lung cancer and mesothelioma	NA	361194	2007	359,187	10455414	European
	ieu-b-4954	2021	Lung cancer	UK Biobank	374687	2671	372,016	11078115	European

<b>Lung cancer</b>	ieu-a-966	2014	Lung cancer	ILCCO	27209	11,348	15,861	8945893	European
	ieu-b-4955	2021	Lung cancer	UK Biobank	374687	2671	372,016	11078115	European
	finn-b-C3_NSCLC_ADENO_EXALLC	2021	lung adenocarcinoma	FINNGEN	174,576	571	174,005	16380303	European
	ieu-a-965	2014	Lung adenocarcinoma	ILCCO	18336	3442	14,894	8881354	European
	finn-b-C3_NSCLC_ADENO	2021	lung adenocarcinoma	FINNGEN	218,792	571	218,221	16380466	European
	ukb-d-C3_BRONCHUS_LUNG	2018	Malignant neoplasm of bronchus and lung	NA	361,194	1,681	359,513	10,156,362	European
	ieu-a-987		Lung cancer	TRICL	85,449	29,863	55,586	10,439,018	European
	ieu-a-984		Lung adenocarcinoma	TRICL	65,864	11,245	54,619	10,345,176	European
	ieu-a-989		Squamous cell lung cancer	TRICL	62,467	7,704	62,467	10,341,529	European
<b>Colorectal cancer</b>	ieu-b-4965	2021	Colorectal cancer	UK Biobank	377673	5657	372,016	11738639	European
	finn-b-C3_COLORECTAL_EXALLC	2021	Colorectal cancer	FINNGEN	177028	3,022	174,006	16380321	European

<b>Colorectal cancer</b>	finn-b-C3_COLON_ADENO_EXALLC	2021	Colon adenocarcinoma	FINNGEN	175402	1396	174,006	16380311	European
	finn-b-C3_COLON_EXALLC	2021	Malignant neoplasm of colon	FINNGEN	175809	1,803	174,006	16380317	European
<b>Malignant neoplasm of stomach (all cancers excluded)</b>	finn-b-C3_STOMACH_EXALLC	2021	Malignant neoplasm of stomach (all cancers excluded)	FINNGEN	174639	633	174,006	16380305	European
<b>Breast cancer</b>	ieu-b-4810	2021	Breast cancer	UK Biobank	212402	13,879	198,523	NA	European
	ebi-a-GCST004988	2017	Breast cancer	NA	139274	76,192	63,082	11069665	European
	ebi-a-GCST007236	2015	Breast cancer	NA	89677	46,785	42,892	13742658	European
	ieu-a-1126	2017	Breast cancer	BCAC	228951	122,977	105,974	10680257	European
	ieu-a-1131	2017	Breast cancer	BCAC	32498	14,910	17,588	10680257	European
	ieu-a-1168	2015	Breast cancer	BCAC	33832	15,748	18,084	13011123	European
	ieu-a-1130	2017	Breast cancer	BCAC	89677	46,785	42,892	10680257	European

<b>Breast cancer</b>	ieu-a-1162	2015	Breast cancer	BCAC	89677	46,785	42,892	195514	European
	ieu-a-1129	2017	Breast cancer	BCAC	106776	61,282	45,494	10680257	European
	ieu-a-1165	2015	Breast cancer	BCAC	37954	2900	35,054	12940150	European
	ukb-a-55	2017	Breast cancer	Neale Lab	337159	7,480	329,679	10894596	European
	ukb-b-16890	2018	Breast cancer	MRC-IEU	462933	10,303	452,630	9851867	European
	ieu-a-1128	2017	ER- Breast cancer	BCAC	127442	21,468	105,974	10680257	European
	ieu-a-1137	2017	ER- Breast cancer	BCAC	22068	4,480	17,588	10680257	European
	ieu-a-1166	2015	ER- Breast cancer	BCAC	21695	3,611	18,084	13011123	European
	ieu-a-1136	2017	ER- Breast cancer	BCAC	50225	7,333	42,892	10680257	European
	ieu-a-1160	2015	ER- Breast cancer	BCAC	50225	7,333	42,892	195514	European
	ieu-a-1135	2017	ER- Breast cancer	BCAC	55149	9,655	45,494	10680257	European

<b>Breast cancer</b>	ieu-a-1163	2015	ER- Breast cancer	BCAC	6881	920	5,961	8828662	European
	ieu-a-1127	2017	ER+ Breast cancer	BCAC	175475	69,501	105,974	10680257	European
	ieu-a-1134	2017	ER+ Breast cancer	BCAC	21814	4,226	17,588	10680257	European
	ieu-a-1167	2015	ER+ Breast cancer	BCAC	22286	4,202	18,084	13011123	European
	ieu-a-1133	2017	ER+ Breast cancer	BCAC	69970	27,078	42,892	10680257	European
	ieu-a-1161	2015	ER+ Breast cancer	BCAC	69970	27,078	42,892	195514	European
	ieu-a-1132	2017	ER+ Breast cancer	BCAC	83691	38,197	45,494	10680257	European
	ieu-a-1164	2015	ER+ Breast cancer	BCAC	23059	1,333	21,726	8714606	European
<b>Liver cancer</b>	ukb-b-16713	2018	Diagnoses - secondary ICD10: C78.7 Secondary malignant neoplasm of liver	MRC-IEU	463,010	1,139	461,871	9,851,867	European
	ieu-b-4915	2021	Liver & bile duct cancer	UK Biobank	372,366	350	372,016	7,687,713	European
	ieu-b-4953	2021	Liver cell carcinoma	UK Biobank	372,184	168	372,016	6,304,034	European

<b>Liver cancer</b>	finn-b-C3_LIVER_INTRAHEPATIC_BILE_DUCTS	2021	Malignant neoplasm of liver and intrahepatic bile ducts	NA	218792	304	218,488	16,380,466	European
	finn-b-C3_LIVER_INTRAHEPATIC_BILE_DUCTS_EXALLC	2021	Malignant neoplasm of liver and intrahepatic bile ducts (all cancers excluded)	NA	174310	304	174,006	16,380,303	European
<b>Ovarian cancer</b>	ieu-a-1230	2017	Serous ovarian cancer: low malignant potential	OCAC	42895	1,954	40,941	NA	European
	ieu-a-1229	2017	Serous ovarian cancer: low grade and low malignant potential	OCAC	43907	2,966	40,941	NA	European
	ieu-b-4963	2021	Ovarian cancer	UK Biobank	199741	1218	198,523	9822229	European
	ieu-a-1120	2017	Ovarian cancer	OCAC	66450	25,509	40,941	NA	European
	ieu-a-1231	2017	Mucinous ovarian cancer: invasive and low malignant potential	OCAC	43507	2,566	40,941	NA	European
	ieu-a-1233	2017	Low malignant potential ovarian cancer	OCAC	47147	3,103	40,941	NA	European
	ieu-a-1232	2017	Low malignant potential mucinous ovarian cancer	OCAC	42090	1149	40,941	NA	European
	ieu-a-1122	2017	Low grade serous ovarian cancer	OCAC	41953	1012	40,941	NA	European
	ieu-a-1123	2017	Invasive mucinous ovarian cancer	OCAC	42358	1,417	40,941	NA	European

<b>Ovarian cancer</b>	ieu-a-1121	2017	High grade serous ovarian cancer	OCAC	53978	13,037	40,941	NA	European
	ieu-a-1228	2017	High grade and low grade serous ovarian cancer	OCAC	54990	14,049	40,941	NA	European
	ieu-a-1125	2017	Endometrioid ovarian cancer	OCAC	43751	2,810	40,941	NA	European
	ieu-a-1124	2017	Clear cell ovarian cancer	OCAC	42307	1366	40,941	NA	European
<b>Kidney cancer</b>	ukb-b-1316	2018	Type of cancer: ICD10: C64 Malignant neoplasm of kidney, except renal pelvis	Binary	463010	1,114	461,896	461,896	European
	finn-b-C3_KIDNEY_NOTRENALPELVIS_EXALLC	2021	"Malignant neoplasm of kidney, except renal pelvis" (all cancers excluded)	Binary	174977	971	174,006	16,380,308	European
	finn-b-C3_KIDNEY_NOTRENALPELVIS	2021	Malignant neoplasm of kidney, except renal pelvis	Binary	218792	971	217,821	16,380,466	European
	finn-b-CD2_BENIGN_KIDNEY	2021	Benign neoplasm: Kidney	Binary	218792	381	218,411	16,380,466	European
	finn-b-CD2_BENIGN_KIDNEY_EXALLC	2021	Benign neoplasm: Kidney (all cancers excluded)	Binary	180887	381	180,506	16,380,337	European
<b>Head and neck cancer</b>	ieu-b-4912	2021	Head and neck cancer	UK Biobank	373122	1,106	372,016	9655080	European
<b>Laryngeal cancer</b>	ieu-b-4913	2021	Laryngeal cancer	UK Biobank	372289	273	372,016	7239512	European

Oral cavity cancer	ieu-b-4961	2021	Oral cavity cancer	UK Biobank	372373	357	372,016	7723107	European
	ieu-b-4962	2021	Oral and oropharyngeal cancer	UK Biobank	372855	839	372,016	9185233	European
	ieu-b-4968	2021	Oropharyngeal cancer	UK Biobank	372510	494	372,016	8283869	European
	ieu-b-86	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	5425	2497	2,928	7514278	European
	ieu-b-87	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	4671	2,342	2329	7510261	European
	ieu-b-88	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	1340	613	727	7514889	European
	ieu-b-89	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	5425	2497	2,928	7514278	European
	ieu-b-90	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	4671	2,342	2329	7510261	European
	ieu-b-91	2016	Oral cavity and pharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	1340	613	727	7514889	European



<b>Oral cavity cancer</b>	ieu-b-93	2016	Oral cavity cancer	Oncoarray oral cavity and oropharyngeal cancer	3464	1135	2,329	7506142	European
	ieu-b-94	2016	Oral cavity cancer	Oncoarray oral cavity and oropharyngeal cancer	4151	1223	2,928	7510833	European
	ieu-b-95	2016	Oral cavity cancer	Oncoarray oral cavity and oropharyngeal cancer	1067	340	727	7511499	European
	ieu-b-96	2016	Oropharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	4018	1090	2,928	7508444	European
	ieu-b-97	2016	Oropharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	3448	1,119	2329	7506485	European
	ieu-b-98	2016	Oropharyngeal cancer	Oncoarray oral cavity and oropharyngeal cancer	932	205	727	7506712	European
<b>Prostate cancer</b>	ieu-b-4809	2021	Prostate cancer	UK Biobank	182625	9132	173,493	NA	European
	ieu-b-85	2018	Prostate cancer	PRACTICAL	140254	79,148	61,106	20346368	European
	ukb-d-C3_PROSTATE	2018	Prostate cancer	Neale lab	361194	6321	354,873	12453833	European

<b>Prostate cancer</b>	finn-b-C3_PROSTATE_EXALLC	2021	Prostate cancer	FINNGEN	80,996	6311	74,685	16377987	European
<b>Oesophageal cancer</b>	ieu-b-4960	2021	Oesophageal cancer	UK Biobank	372,756	740	372,016	8,970,465	European
<b>Endometrial cancer</b>	ukb-b-13545	2018	endometrial cancer	MRC-IEU	462933	1151	461,782	9851867	European
	ebi-a-GCST006464	2018	Endometrial cancer	NA	121885	12,906	108,979	9470555	European
	ebi-a-GCST006465	2018	Endometrial cancer (endometrioid histology)	NA	54884	8,758	46,126	9464330	European
	ebi-a-GCST006466	2018	Endometrial cancer (Non-endometrioid histology)	NA	36677	1,230	35,447	8974630	European