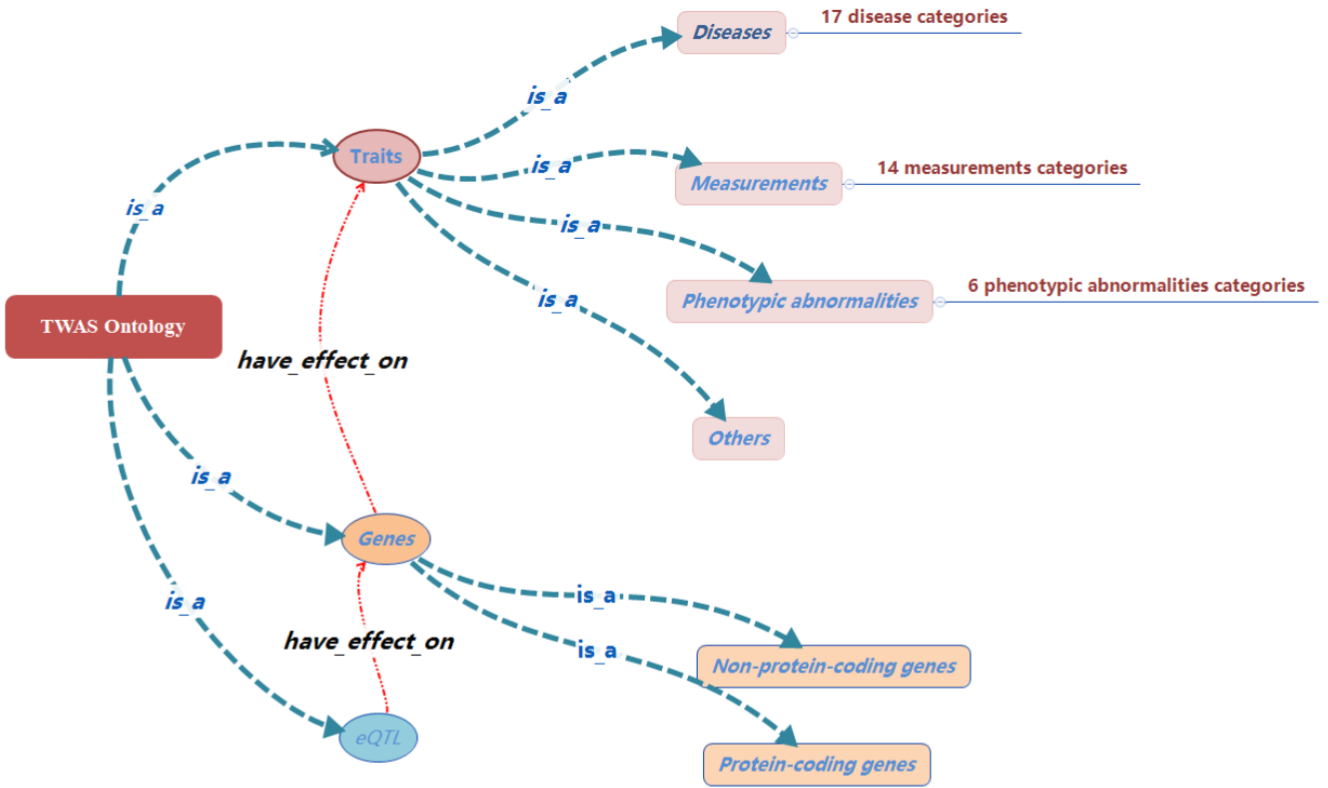


Supplementary Figure S1. An overview of data structure of TWAS Atlas.



Supplementary Figure S2. TWAS ontology hierarchical structure and key ontological terms.

Supplementary Table S1. The number of curated elements for each trait category collected in TWAS Atlas

<i>Trait categories</i>	<i>Trait subcategories</i>	<i>#Traits</i>	<i>#Associations</i>	<i>#Genes</i>	<i>#Tissues</i>	<i>#Publications</i>
Disease	cancer	21	3095	1351	69	37
	nervous system disease	18	14909	3972	82	55
	immune system disease	12	13159	3088	61	15
	musculoskeletal system disease	11	4764	2668	57	8
	cardiovascular disease	10	9052	3243	81	26
	respiratory system disease	10	4640	1320	62	16
	disease of visual system	9	3751	614	49	5
	genetic disorder	8	7118	1132	76	14
	digestive system disease	6	11855	1389	72	18
	chronic disease	5	396	276	45	7
	endocrine system disease	4	11547	1982	65	13
	hematologic disease	4	3437	1475	54	3
	metabolic disease	4	544	421	53	4
	central nervous system disease	3	1016	559	64	14
	urinary system disease	3	1241	348	61	7
	psychiatric disorder	1	1001	683	50	8
other disease	9	43002	4545	61	10	
Measurement	body weights and measures	18	174294	15,907	63	18
	hematological measurement	17	22592	6500	63	16
	others measurement	14	7297	2570	66	12
	diabetes mellitus	5	3465	1145	55	11

	biomarker					
	brain measurement	4	1667	926	49	5
	metabolite measurement	4	893	355	44	3
	temporal measurement	4	5157	1556	53	7
	cardiovascular measurement	3	6451	1522	56	4
	sleep measurement	3	1873	1263	54	5
	smoking behaviour measurement	3	606	386	42	6
	bone measurement	2	15228	1854	53	8
	infectious disease biomarker	2	24	20	2	1
	pulmonary function measurement	2	1298	730	25	2
Phenotypic abnormality	abnormality of connective tissue	2	11	5	10	1
	abnormality of the cardiovascular system	2	4768	1292	47	3
	abnormal inflammatory response	1	1401	934	54	3
	abnormal of the respiratory system	1	1	1	1	1
	abnormality of blood and blood-forming tissues	1	119	78	36	2
	abnormality of head or neck	1	47	5	36	1
Others	chemical entity	28	8002	2060	67	16
	material entity	7	4485	1838	61	16
	vital signs	6	16428	3349	51	7

	nutrient intake	4	1886	469	44	1
	process	4	1785	763	55	5
Total	-	257	401266	22247	135	200