

Table S1 Socio-demographic index values for all estimated CBD 2019 locations, 1990-2011

Location	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Global	0.916	0.916	0.921	0.925	0.929	0.934	0.938	0.942	0.947	0.951	0.956	0.961	0.966	0.971	0.976	0.981	0.986	0.991	0.996	1.001	1.006	1.011	1.016	1.021	1.026	1.031	1.036	1.041	1.046	1.051
Central Europe, eastern Europe, and central Asia	0.514	0.514	0.521	0.525	0.531	0.536	0.541	0.546	0.551	0.556	0.561	0.566	0.571	0.576	0.581	0.586	0.591	0.596	0.601	0.606	0.611	0.616	0.621	0.626	0.631	0.636	0.641	0.646	0.651	0.656
Central Asia	0.551	0.551	0.557	0.558	0.559	0.559	0.56	0.56	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561	0.561
Armenia	0.541	0.541	0.541	0.544	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546
Azerbaijan	0.576	0.578	0.578	0.576	0.573	0.569	0.561	0.559	0.559	0.556	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554	0.554
Georgia	0.654	0.658	0.657	0.654	0.65	0.643	0.638	0.633	0.628	0.625	0.624	0.626	0.63	0.636	0.641	0.646	0.651	0.656	0.66	0.663	0.665	0.667	0.67	0.676	0.68	0.684	0.689	0.693	0.697	0.702
Kazakhstan	0.602	0.606	0.611	0.615	0.619	0.622	0.625	0.628	0.631	0.632	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633	0.633
Kyrgyzstan	0.615	0.617	0.621	0.625	0.631	0.636	0.641	0.646	0.651	0.656	0.661	0.666	0.671	0.676	0.681	0.686	0.691	0.696	0.701	0.706	0.711	0.716	0.721	0.726	0.731	0.736	0.741	0.746	0.751	0.756
Mongolia	0.605	0.607	0.611	0.615	0.619	0.623	0.627	0.631	0.635	0.639	0.643	0.647	0.651	0.655	0.659	0.663	0.667	0.671	0.675	0.679	0.683	0.687	0.691	0.695	0.699	0.703	0.707	0.711	0.715	0.719
Tajikistan	0.408	0.413	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414
Turkmenistan	0.448	0.451	0.454	0.457	0.458	0.458	0.458	0.457	0.456	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455
Uzbekistan	0.49	0.492	0.494	0.496	0.498	0.501	0.505	0.51	0.515	0.52	0.525	0.531	0.536	0.541	0.546	0.551	0.556	0.561	0.566	0.571	0.576	0.581	0.586	0.591	0.596	0.601	0.606	0.611	0.616	0.621
Central Europe	0.641	0.647	0.652	0.658	0.663	0.667	0.671	0.675	0.679	0.683	0.687	0.691	0.695	0.699	0.703	0.707	0.711	0.715	0.719	0.723	0.727	0.731	0.735	0.739	0.743	0.747	0.751	0.755	0.759	0.763
Albania	0.54	0.537	0.534	0.532	0.531	0.53	0.529	0.528	0.527	0.526	0.525	0.524	0.523	0.522	0.521	0.52	0.519	0.518	0.517	0.516	0.515	0.514	0.513	0.512	0.511	0.51	0.509	0.508	0.507	0.506
Bosnia and Herzegovina	0.533	0.534	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532	0.532
Bulgaria	0.631	0.641	0.648	0.656	0.666	0.671	0.676	0.681	0.675	0.675	0.68	0.685	0.69	0.694	0.697	0.701	0.706	0.711	0.716	0.721	0.726	0.731	0.736	0.741	0.746	0.751	0.756	0.761	0.766	0.771
Croatia	0.48	0.488	0.492	0.492	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
Czech Republic	0.688	0.696	0.705	0.718	0.736	0.744	0.755	0.76	0.765	0.771	0.776	0.782	0.786	0.79	0.794	0.798	0.801	0.804	0.807	0.81	0.813	0.816	0.819	0.821	0.824	0.827	0.83	0.833	0.836	0.839
Hungary	0.699	0.663	0.671	0.678	0.685	0.693	0.7	0.707	0.713	0.718	0.724	0.73	0.735	0.741	0.746	0.751	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821
Montenegro	0.701	0.701	0.699	0.695	0.69	0.687	0.686	0.687	0.689	0.692	0.696	0.701	0.706	0.712	0.717	0.723	0.729	0.736	0.743	0.749	0.756	0.763	0.77	0.776	0.781	0.786	0.791	0.796	0.801	0.806
North Macedonia	0.62	0.62	0.623	0.625	0.627	0.631	0.635	0.64	0.646	0.651	0.656	0.662	0.668	0.674	0.679	0.684	0.689	0.694	0.699	0.704	0.709	0.714	0.719	0.724	0.729	0.734	0.739	0.744	0.749	0.754
Poland	0.632	0.637	0.644	0.643	0.641	0.647	0.647	0.645	0.643	0.641	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Romania	0.625	0.632	0.635	0.638	0.643	0.649	0.655	0.663	0.669	0.674	0.68	0.687	0.692	0.698	0.703	0.708	0.713	0.718	0.723	0.728	0.733	0.738	0.743	0.748	0.753	0.758	0.763	0.768	0.773	0.778
Serbia	0.626	0.635	0.639	0.639	0.64	0.644	0.647	0.651	0.655	0.66	0.665	0.67	0.676	0.681	0.686	0.691	0.696	0.701	0.706	0.711	0.716	0.721	0.726	0.731	0.736	0.741	0.746	0.751	0.756	0.761
Slovakia	0.656	0.662	0.668	0.679	0.693	0.702	0.709	0.716	0.724	0.731	0.739	0.746	0.752	0.756	0.76	0.764	0.768	0.772	0.777	0.781	0.784	0.789	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829
Slovenia	0.726	0.731	0.736	0.741	0.746	0.751	0.756	0.762	0.768	0.774	0.78	0.787	0.793	0.799	0.805	0.811	0.817	0.823	0.829	0.835	0.841	0.847	0.853	0.859	0.865	0.871	0.877	0.883	0.889	0.895
Eastern Europe	0.48	0.487	0.497	0.502	0.508	0.514	0.52	0.526	0.532	0.538	0.544	0.55	0.556	0.562	0.568	0.574	0.58	0.584	0.588	0.592	0.596	0.6	0.604	0.608	0.612	0.616	0.62	0.624	0.628	0.632
Belarus	0.91	0.915	0.92	0.925	0.93	0.935	0.94	0.945	0.95	0.955	0.96	0.965	0.97	0.975	0.98	0.985	0.99	0.995	1.0	1.005	1.01	1.015	1.02	1.025	1.03	1.035	1.04	1.045	1.05	1.055
Estonia	0.605	0.61	0.615	0.62	0.625	0.63	0.635	0.64	0.645	0.65	0.655	0.66	0.665	0.67	0.675	0.68	0.685	0.69	0.695	0.7	0.705	0.71	0.715	0.72	0.725	0.73	0.735	0.74	0.745	0.75
Latvia	0.645	0.648	0.652	0.656	0.66	0.664	0.668	0.672	0.676	0.68	0.684	0.688	0.692	0.696	0.7	0.704	0.708	0.712	0.716	0.72	0.724	0.728	0.732	0.736	0.74	0.744	0.748	0.752	0.756	0.76
Lithuania	0.67	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672
Maldives	0.585	0.589	0.591	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594	0.594
Ukraine	0.653	0.657	0.661	0.665	0.669	0.673	0.677	0.681	0.685	0.689	0.693	0.697	0.701	0.705	0.709	0.713	0.717	0.721	0.725	0.729	0.733	0.737	0.741	0.745	0.749	0.753	0.757	0.761	0.765	0.769
High income	0.755	0.76	0.765	0.769	0.773	0.777	0.78	0.783	0.786	0.789	0.792	0.795	0.798	0.801	0.804	0.807	0.81	0.813	0.816	0.819	0.822	0.825	0.828	0.831	0.834	0.837	0.84	0.843	0.846	0.849
Australia	0.742	0.746	0.749	0.753	0.757	0.761	0.765	0.769	0.773	0.777	0.781	0.785	0.789	0.793	0.797	0.801	0.805	0.809	0.813	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849		

Table S1 Socio-demographic index values for all estimated GBD 2019 locations, 1990-2011

Location	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Waco	0.79	0.79	0.79	0.80	0.80	0.80	0.81	0.81	0.81	0.81	0.81	0.82	0.82	0.82	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83		
Winnipeg	0.78	0.78	0.78	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79		
Western Latin America	0.584	0.589	0.597	0.602	0.608	0.614	0.62	0.625	0.63	0.634	0.64	0.644	0.648	0.651	0.653	0.655	0.663	0.664	0.667	0.671	0.676	0.681	0.686	0.689	0.692	0.696	0.701	0.71	0.716	0.719	0.721	
Argentina	0.581	0.585	0.593	0.599	0.605	0.611	0.617	0.622	0.625	0.628	0.634	0.641	0.644	0.646	0.648	0.651	0.655	0.657	0.661	0.665	0.669	0.674	0.678	0.682	0.687	0.692	0.696	0.702	0.706	0.708	0.709	
Chile	0.592	0.6	0.606	0.611	0.617	0.622	0.628	0.633	0.638	0.643	0.648	0.653	0.658	0.663	0.668	0.673	0.678	0.683	0.688	0.693	0.698	0.703	0.708	0.713	0.718	0.723	0.728	0.733	0.738	0.743	0.748	
Uruguay	0.581	0.584	0.588	0.591	0.594	0.597	0.6	0.606	0.612	0.618	0.622	0.626	0.628	0.631	0.633	0.636	0.639	0.642	0.645	0.649	0.653	0.658	0.663	0.668	0.673	0.678	0.683	0.688	0.693	0.697	0.701	
Western Europe	0.75	0.76	0.762	0.767	0.771	0.775	0.779	0.782	0.784	0.787	0.79	0.794	0.797	0.8	0.802	0.805	0.807	0.81	0.812	0.815	0.817	0.821	0.824	0.827	0.83	0.832	0.835	0.838	0.841	0.843	0.845	
Austria	0.844	0.848	0.84	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.841	
Belgium	0.746	0.75	0.756	0.762	0.767	0.771	0.775	0.779	0.782	0.784	0.787	0.792	0.796	0.799	0.802	0.805	0.808	0.81	0.813	0.816	0.82	0.824	0.829	0.834	0.837	0.841	0.843	0.846	0.849	0.851	0.853	
Cyprus	0.642	0.67	0.68	0.691	0.702	0.713	0.723	0.732	0.741	0.75	0.758	0.767	0.774	0.78	0.786	0.791	0.797	0.804	0.81	0.816	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872	0.877
Denmark	0.806	0.809	0.813	0.816	0.82	0.824	0.828	0.833	0.836	0.84	0.844	0.848	0.852	0.855	0.858	0.86	0.862	0.864	0.865	0.867	0.87	0.873	0.875	0.878	0.88	0.882	0.884	0.886	0.888	0.889	0.89	
Estonia	0.737	0.739	0.742	0.745	0.749	0.753	0.757	0.761	0.764	0.768	0.772	0.776	0.78	0.783	0.786	0.789	0.792	0.795	0.798	0.801	0.804	0.807	0.81	0.813	0.815	0.817	0.819	0.821	0.823	0.825	0.827	
France	0.738	0.743	0.75	0.755	0.761	0.767	0.773	0.779	0.785	0.791	0.797	0.803	0.809	0.815	0.821	0.827	0.833	0.839	0.845	0.851	0.857	0.863	0.869	0.875	0.881	0.887	0.893	0.899	0.905	0.911	0.917	
Germany	0.819	0.83	0.838	0.844	0.849	0.854	0.859	0.864	0.869	0.874	0.879	0.884	0.889	0.894	0.899	0.904	0.909	0.914	0.919	0.924	0.929	0.934	0.939	0.944	0.949	0.954	0.959	0.964	0.969	0.974	0.979	
Greece	0.682	0.688	0.695	0.702	0.707	0.713	0.719	0.725	0.731	0.737	0.743	0.749	0.755	0.761	0.767	0.773	0.779	0.785	0.791	0.797	0.803	0.809	0.815	0.821	0.827	0.833	0.839	0.845	0.851	0.857	0.863	
Iceland	0.764	0.77	0.774	0.778	0.782	0.785	0.788	0.79	0.794	0.799	0.806	0.813	0.818	0.822	0.824	0.827	0.83	0.834	0.838	0.842	0.846	0.847	0.847	0.848	0.85	0.854	0.858	0.863	0.868	0.873	0.878	
Ireland	0.73	0.735	0.741	0.747	0.753	0.758	0.763	0.768	0.774	0.78	0.786	0.793	0.799	0.806	0.812	0.816	0.819	0.821	0.824	0.827	0.831	0.835	0.839	0.843	0.847	0.851	0.855	0.859	0.864	0.868	0.873	
Israel	0.717	0.721	0.726	0.73	0.734	0.738	0.742	0.745	0.749	0.752	0.756	0.76	0.762	0.765	0.769	0.773	0.776	0.779	0.783	0.787	0.791	0.794	0.797	0.8	0.803	0.806	0.809	0.812	0.815	0.818	0.821	
Italy	0.712	0.717	0.722	0.727	0.732	0.737	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	
Luxembourg	0.818	0.82	0.824	0.828	0.832	0.836	0.84	0.844	0.848	0.852	0.856	0.86	0.864	0.868	0.872	0.876	0.88	0.884	0.888	0.892	0.896	0.9	0.904	0.908	0.912	0.916	0.92	0.924	0.928	0.932	0.936	
Malta	0.666	0.67	0.675	0.682	0.689	0.695	0.701	0.707	0.713	0.719	0.725	0.731	0.737	0.743	0.749	0.755	0.761	0.767	0.773	0.779	0.785	0.791	0.797	0.803	0.809	0.815	0.821	0.827	0.833	0.839		
Maldives	0.834	0.837	0.84	0.843	0.846	0.849	0.852	0.855	0.858	0.861	0.864	0.867	0.87	0.872	0.875	0.877	0.879	0.881	0.883	0.886	0.888	0.89	0.892	0.893	0.895	0.897	0.899	0.901	0.903	0.905	0.907	
Netherlands	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886	0.891	0.896	0.901	0.906	0.911	0.916	0.921	0.926	0.931	0.936	0.941	0.946	
Norway	0.807	0.812	0.818	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868	0.873	0.878	0.883	0.888	0.893	0.898	0.903	0.908	0.913	0.918	0.923	0.928	0.933	0.938	0.943	0.948	0.953	0.958	
Portugal	0.607	0.615	0.622	0.629	0.636	0.643	0.65	0.657	0.664	0.671	0.678	0.685	0.692	0.699	0.706	0.713	0.72	0.727	0.734	0.741	0.748	0.755	0.762	0.769	0.776	0.783	0.79	0.797	0.804	0.811		
Sao Paulo	0.617	0.621	0.625	0.629	0.633	0.637	0.641	0.645	0.649	0.653	0.657	0.661	0.665	0.669	0.673	0.677	0.681	0.685	0.689	0.693	0.697	0.701	0.705	0.709	0.713	0.717	0.721	0.725	0.729	0.733	0.737	
Spain	0.647	0.655	0.662	0.669	0.675	0.681	0.687	0.693	0.699	0.705	0.711	0.717	0.723	0.729	0.735	0.741	0.747	0.753	0.759	0.765	0.771	0.777	0.783	0.789	0.795	0.801	0.807	0.813	0.819	0.825	0.831	
Sweden	0.769	0.775	0.782	0.788	0.794	0.801	0.806	0.811	0.815	0.819	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868	0.873	0.878	0.883	0.888	0.893	0.898	0.903	0.908	0.913	0.918	0.923	
Stockholm	0.813	0.818	0.824	0.829	0.834	0.839	0.844	0.848	0.853	0.858	0.863	0.868	0.873	0.878	0.883	0.888	0.893	0.898	0.903	0.908	0.913	0.918	0.923	0.928	0.933	0.938	0.943	0.948	0.953	0.958	0.963	
Sweden except Stockholm	0.738	0.744	0.751	0.757	0.764	0.771	0.778	0.785	0.792	0.799	0.806	0.813	0.82	0.827	0.834	0.841	0.848	0.855	0.862	0.869	0.876	0.883	0.89	0.897	0.904	0.911	0.918	0.925	0.932	0.939	0.946	
Switzerland	0.808	0.809	0.813	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849	0.853	0.857	0.861	0.865	0.869	0.873	0.877	0.881	0.885	0.889	0.893	0.897	0.901	0.905	0.909	0.913	0.917	0.921	0.925	
UK	0.75	0.755	0.76	0.765	0.77	0.774	0.778	0.782	0.786	0.79	0.794	0.798	0.802	0.806	0.81	0.814	0.818	0.822	0.826	0.83	0.834	0.838	0.842	0.846	0.85	0.854	0.858	0.862	0.866	0.87	0.874	
England	0.75	0.755	0.76	0.765	0.77	0.774	0.778	0.782	0.786	0.79	0.794	0.798	0.802	0.806	0.81	0.814	0.818	0.822	0.826	0.83	0.834	0.838	0.842	0.846	0.85	0.854	0.858	0.862	0.866	0.87	0.874	
East Midlands	0.725	0.73	0.735	0.74	0.745	0.749	0.754	0.758	0.763	0.767	0.771	0.775	0.779	0.783	0.787	0.791	0.795	0.799	0.803	0.807	0.811	0.815	0.819	0.823	0.827	0.831	0.835	0.839	0.843	0.847	0.851	
Derby	0.738	0.741	0.7																													

Table S1: Socio-demographic index values for all estimated CBD 2019 locations, 1990-2011

Location	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
West Sussex	0.795	0.769	0.774	0.779	0.783	0.786	0.788	0.79	0.794	0.798	0.803	0.807	0.811	0.814	0.818	0.821	0.824	0.827	0.83	0.833	0.835	0.837	0.839	0.841	0.843	0.845	0.847	0.849	0.851	0.853	
Wales and West Midlands	0.719	0.711	0.715	0.719	0.723	0.727	0.731	0.735	0.739	0.743	0.747	0.751	0.755	0.759	0.763	0.767	0.771	0.775	0.779	0.783	0.787	0.791	0.795	0.799	0.803	0.807	0.811	0.815	0.819	0.823	
Widening	0.626	0.631	0.635	0.639	0.643	0.647	0.651	0.655	0.659	0.663	0.667	0.671	0.675	0.679	0.683	0.687	0.691	0.695	0.699	0.703	0.707	0.711	0.715	0.719	0.723	0.727	0.731	0.735	0.739	0.743	
South West Midlands	0.751	0.755	0.76	0.765	0.77	0.775	0.779	0.783	0.787	0.791	0.795	0.799	0.803	0.807	0.811	0.815	0.819	0.823	0.827	0.831	0.835	0.839	0.843	0.847	0.851	0.855	0.859	0.863	0.867	0.871	
Both North and East London	0.793	0.797	0.801	0.805	0.809	0.813	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849	0.853	0.857	0.861	0.865	0.869	0.873	0.877	0.881	0.885	0.889	0.893	0.897	0.901	0.905	0.909	
Bournemouth	0.761	0.766	0.771	0.776	0.781	0.785	0.789	0.793	0.797	0.801	0.805	0.809	0.813	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849	0.853	0.857	0.861	0.865	0.869	0.873	0.877	0.881	
Bristol, City of	0.792	0.796	0.801	0.805	0.81	0.814	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849	0.853	0.857	0.861	0.865	0.869	0.873	0.877	0.881	0.885	0.889	0.893	0.897	0.901	0.905	0.909	
Cambridge	0.757	0.761	0.765	0.769	0.773	0.777	0.781	0.785	0.789	0.793	0.797	0.801	0.805	0.809	0.813	0.817	0.821	0.825	0.829	0.833	0.837	0.841	0.845	0.849	0.853	0.857	0.861	0.865	0.869	0.873	0.877
Derby	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872	0.877	0.882	0.887	0.892	0.897
Donset	0.741	0.746	0.751	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886	0.891
Gloucestershire	0.764	0.768	0.773	0.778	0.783	0.788	0.793	0.798	0.803	0.808	0.813	0.818	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868	0.873	0.878	0.883	0.888	0.893	0.898	0.903	0.908	0.913
North Somerset	0.744	0.749	0.754	0.759	0.764	0.769	0.774	0.779	0.784	0.789	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829	0.834	0.839	0.844	0.849	0.854	0.859	0.864	0.869	0.874	0.879	0.884	0.889	0.894
Plymouth	0.746	0.751	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886	0.891	0.896
Poole	0.753	0.758	0.763	0.768	0.773	0.778	0.783	0.788	0.793	0.798	0.803	0.808	0.813	0.818	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868	0.873	0.878	0.883	0.888	0.893	0.898	0.903
South West	0.732	0.737	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872	0.877	0.882
South Gloucestershire	0.776	0.78	0.784	0.788	0.792	0.796	0.799	0.803	0.807	0.811	0.815	0.819	0.823	0.827	0.831	0.835	0.839	0.843	0.847	0.851	0.855	0.859	0.863	0.867	0.871	0.875	0.879	0.883	0.887	0.891	0.895
Sussex	0.765	0.77	0.775	0.78	0.785	0.79	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829	0.834	0.839	0.844	0.849	0.854	0.859	0.864	0.869	0.874	0.879	0.884	0.889	0.894	0.899	0.904	0.909	0.914
Torkey	0.71	0.715	0.72	0.725	0.73	0.735	0.74	0.745	0.75	0.755	0.76	0.765	0.77	0.775	0.78	0.785	0.79	0.795	0.8	0.805	0.81	0.815	0.82	0.825	0.83	0.835	0.84	0.845	0.85	0.855	
Wiltshire	0.751	0.755	0.759	0.764	0.769	0.774	0.779	0.784	0.789	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829	0.834	0.839	0.844	0.849	0.854	0.859	0.864	0.869	0.874	0.879	0.884	0.889	0.894	0.899
West Midlands	0.736	0.741	0.746	0.751	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886
Wokingham	0.756	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872	0.877	0.882	0.887	0.892	0.897	0.902	0.907
Conyouth	0.738	0.744	0.75	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886	0.891
Darley	0.699	0.704	0.709	0.714	0.719	0.724	0.729	0.734	0.739	0.744	0.749	0.754	0.759	0.764	0.769	0.774	0.779	0.784	0.789	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829	0.834	0.839	0.844	0.849
Herefordshire, County of	0.722	0.727	0.732	0.737	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872
Huddersfield	0.677	0.682	0.687	0.692	0.697	0.702	0.707	0.712	0.717	0.722	0.727	0.732	0.737	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827
Shephard	0.728	0.733	0.738	0.743	0.748	0.753	0.758	0.763	0.768	0.773	0.778	0.783	0.788	0.793	0.798	0.803	0.808	0.813	0.818	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868	0.873	0.878
Southampton	0.695	0.7	0.705	0.71	0.715	0.72	0.725	0.73	0.735	0.74	0.745	0.75	0.755	0.76	0.765	0.77	0.775	0.78	0.785	0.79	0.795	0.8	0.805	0.81	0.815	0.82	0.825	0.83	0.835	0.84	0.845
Staffordshire	0.725	0.73	0.736	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837	0.842	0.847	0.852	0.857	0.862	0.867	0.872	0.877
Stoke-on-Trent	0.687	0.692	0.697	0.702	0.707	0.712	0.717	0.722	0.727	0.732	0.737	0.742	0.747	0.752	0.757	0.762	0.767	0.772	0.777	0.782	0.787	0.792	0.797	0.802	0.807	0.812	0.817	0.822	0.827	0.832	0.837
Telford and Wrekin	0.718	0.723	0.728	0.733	0.738	0.743	0.748	0.753	0.758	0.763	0.768	0.773	0.778	0.783	0.788	0.793	0.798	0.803	0.808	0.813	0.818	0.823	0.828	0.833	0.838	0.843	0.848	0.853	0.858	0.863	0.868
Walsall	0.681	0.685	0.689	0.693	0.697	0.701	0.705	0.709	0.713	0.717	0.721	0.725	0.729	0.733	0.737	0.741	0.745	0.749	0.753	0.757	0.761	0.765	0.769	0.773	0.777	0.781	0.785	0.789	0.793	0.797	0.801
Warwickshire	0.754	0.758	0.762	0.766	0.77	0.774	0.778	0.782	0.786	0.79	0.794	0.798	0.802	0.806	0.81	0.814	0.818	0.822	0.826	0.83	0.834	0.838	0.842	0.846	0.85	0.854	0.858	0.862	0.866	0.87	0.874
Wiltshire	0.751	0.755	0.759	0.764	0.769	0.774	0.779	0.784	0.789	0.794	0.799	0.804	0.809	0.814	0.819	0.824	0.829	0.834	0.839	0.844	0.849	0.854	0.859	0.864	0.869	0.874	0.879	0.884	0.889	0.894	0.899
Wokingham	0.756	0.761	0.766	0.771	0.776	0.781	0.786	0.791	0.796	0.801	0.806	0.811	0.816	0.821	0.826	0.831	0.836	0.841	0.846	0.851	0.856	0.861	0.866	0.871	0.876	0.881	0.886	0.891</			

Table S2 Five socio-demographic index quintiles in GBD 2019

Sdi_quintile	Lower_bound	Upper_bound
Low SDI	0	0.454743
Low-middle SDI	0.454743	0.607679
Middle SDI	0.607679	0.689504
High-middle SDI	0.689504	0.805129
High SDI	0.805129	1

Table S3 Regional incident cases and age-standardized incidence rate of genitourinary cancers in 2019

Region	Kidney cancer		Bladder cancer		Prostate cancer	
	Incident cases ($\times 10^3$)	ASIR per 100,000 population	Incident cases ($\times 10^3$)	ASIR per 100,000 population	Incident cases ($\times 10^3$)	ASIR per 100,000 population
Andean Latin America	2.02(1.60 - 2.50)	3.51(2.78 - 4.35)	1.38(1.13 - 1.68)	2.52(2.05 - 3.05)	12.09(9.19 - 15.59)	47.52(36.13 - 61.32)
Australasia	4.09(3.29 - 5.10)	8.98(7.19 - 11.22)	4.41(3.56 - 5.52)	8.66(6.98 - 10.85)	25.70(19.14 - 37.96)	108.35(80.76 - 159.34)
Caribbean	1.86(1.54 - 2.21)	3.68(3.05 - 4.37)	2.82(2.42 - 3.3)	5.45(4.68 - 6.39)	22.76(17.70 - 28.12)	95.83(74.43 - 118.13)
Central Asia	3.91(3.52 - 4.34)	4.75(4.31 - 5.24)	3.26(2.93 - 3.60)	4.57(4.09 - 5.04)	4.77(3.84 - 5.73)	18.62(14.69 - 22.13)
Central Europe	17.69(15.49 - 20.14)	8.90(7.79 - 10.12)	27.06(23.61 - 30.69)	12.61(10.98 - 14.29)	43.82(32.06 - 51.72)	46.76(34.28 - 55.2)
Central Latin America	10.41(8.89 - 12.10)	4.32(3.69 - 5.02)	6.23(5.33 - 7.28)	2.68(2.30 - 3.14)	65.12(51.32 - 86.14)	62.29(49.43 - 82.24)
Central Sub-Saharan Africa	0.77(0.58 - 1.00)	1.13(0.84 - 1.55)	1.75(1.11 - 2.58)	3.78(2.35 - 5.56)	4.53(3.18 - 5.80)	29.16(20.09 - 37.48)
East Asia	64.26(54.11 - 75.60)	3.32(2.84 - 3.88)	105.42(88.44 - 124.57)	5.25(4.43 - 6.17)	161.97(126.34 - 213.69)	17.72(14.09 - 23.07)
Eastern Europe	32.49(29.18 - 36.28)	10.03(9.02 - 11.18)	24.38(21.59 - 27.36)	7.07(6.26 - 7.93)	64.66(45.77 - 79.26)	48.80(34.95 - 59.51)
Eastern Sub-Saharan Africa	3.30(2.72 - 4.09)	1.61(1.33 - 1.98)	4.62(3.95 - 5.44)	3.17(2.71 - 3.7)	16.32(12.86 - 20.22)	26.56(20.98 - 32.42)
High-income Asia Pacific	17.69(15.15 - 20.21)	4.45(3.87 - 5.07)	35.42(29.62 - 41.17)	7.50(6.42 - 8.69)	67.98(52.43 - 91.27)	31.64(24.54 - 42.35)
High-income North America	68.19(58.77 - 78.45)	11.72(10.12 - 13.47)	57.00(49.42 - 65.65)	8.98(7.77 - 10.35)	331.89(262.39 - 494.58)	113.02(89.54 - 168.18)
North Africa and Middle East	15.74(13.60 - 18.04)	3.18(2.76 - 3.62)	41.29(34.67 - 49.95)	9.55(8.09 - 11.41)	47.47(36.99 - 55.85)	23.71(18.52 - 27.88)
Oceania	0.10(0.08 - 0.13)	1.08(0.87 - 1.41)	0.17(0.13 - 0.22)	2.48(1.96 - 3.11)	0.66(0.48 - 0.84)	26.48(19.89 - 33.17)
South Asia	16.77(14.67 - 19.37)	1.13(0.99 - 1.31)	31.55(27.90 - 35.69)	2.38(2.10 - 2.69)	53.95(44.20 - 69.73)	9.26(7.62 - 11.98)
Southeast Asia	16.45(13.38 - 20.84)	2.58(2.10 - 3.26)	16.34(14.19 - 19.14)	2.85(2.46 - 3.33)	44.47(34.33 - 52.6)	19.31(14.80 - 22.85)

Southern Latin America	7.30(5.58 - 9.29)	9.05(6.92 - 11.57)	5.97(4.74 - 7.48)	7.11(5.63 - 8.92)	19.52(14.60 - 27.16)	53.97(40.42 - 74.92)
Southern Sub-Saharan Africa	1.13(1.03 - 1.23)	1.87(1.70 - 2.02)	2.20(1.96 - 2.45)	4.04(3.61 - 4.48)	10.11(8.08 - 11.91)	53.16(41.87 - 60.83)
Tropical Latin America	8.42(7.92 - 8.88)	3.54(3.34 - 3.74)	9.71(8.97 - 10.36)	4.09(3.76 - 4.37)	56.94(49.55 - 84.1)	54.94(47.67 - 81.28)
Western Europe	75.60(66.61 - 85.73)	9.31(8.20 - 10.59)	138.24(119.20 - 159.26)	14.93(12.82 - 17.3)	325.49(267.13 - 469.92)	78.67(64.34 - 113.34)
Western Sub-Saharan Africa	3.58(2.67 - 4.67)	1.20(0.98 - 1.47)	5.07(3.50 - 6.11)	2.93(2.05 - 3.49)	30.23(16.78 - 40.61)	43.52(24.40 - 57.94)

All data reported as number or rate (95% UI). *ASIR* age-standardized incidence rate; *UI* uncertainty interval

Table S4 Regional deaths and age - standardized mortality rate of genitourinary cancers in 2019

Region	Kidney cancer		Bladder cancer		Prostate cancer	
	Deaths ($\times 10^3$)	ASMR per 100,000 population	Deaths ($\times 10^3$)	ASMR per 100,000 population	Deaths ($\times 10^3$)	ASMR per 100,000 population
Andean Latin America	1.18(0.94 - 1.46)	2.12(1.69 - 2.63)	0.87(0.72 - 1.05)	1.63(1.33 - 1.97)	6.26(4.85 - 7.86)	25.50(19.68 - 32.03)
Australasia	1.71(1.54 - 1.89)	3.41(3.08 - 3.75)	1.63(1.43 - 1.81)	2.96(2.61 - 3.29)	5.41(4.43 - 7.64)	22.32(18.28 - 31.42)
Caribbean	0.99(0.83 - 1.16)	1.93(1.62 - 2.27)	1.52(1.31 - 1.75)	2.93(2.54 - 3.38)	9.83(7.85 - 12.06)	42.75(34.14 - 52.35)
Central Asia	2.06(1.87 - 2.29)	2.72(2.48 - 3.00)	1.60(1.44 - 1.77)	2.56(2.30 - 2.82)	2.57(2.06 - 3.06)	12.43(9.75 - 14.81)
Central Europe	9.63(8.50 - 10.84)	4.52(3.99 - 5.11)	11.88(10.47 - 13.44)	5.29(4.66 - 5.99)	18.83(14.10 - 22.05)	21.56(16.05 - 25.11)
Central Latin America	5.60(4.80 - 6.51)	2.38(2.04 - 2.76)	3.40(2.93 - 3.95)	1.51(1.30 - 1.76)	21.67(16.87 - 28.46)	22.11(17.32 - 29.24)
Central Sub - Saharan Africa	0.51(0.38 - 0.69)	0.89(0.66 - 1.25)	1.38(0.86 - 2.03)	3.35(2.06 - 4.93)	4.04(2.81 - 5.17)	29.92(20.54 - 38.38)
East Asia	25.49(21.43 - 29.95)	1.30(1.10 - 1.52)	42.16(36.02 - 49.35)	2.27(1.95 - 2.64)	57.21(45.38 - 74.04)	7.88(6.36 - 9.91)
Eastern Europe	14.90(13.40 - 16.55)	4.36(3.92 - 4.84)	10.93(9.70 - 12.2)	3.11(2.75 - 3.47)	20.46(15.2 - 25.07)	17.53(12.95 - 21.71)
Eastern Sub - Saharan Africa	2.17(1.80 - 2.68)	1.27(1.05 - 1.56)	3.63(3.11 - 4.24)	2.74(2.35 - 3.19)	13.81(10.91 - 16.67)	24.80(19.56 - 29.64)
High - income Asia Pacific	9.71(8.42 - 10.48)	2.00(1.79 - 2.13)	12.88(10.68 - 14.23)	2.26(1.92 - 2.47)	19.38(14.97 - 23.66)	8.60(6.67 - 10.53)
High - income North America	22.00(20.41 - 23.15)	3.49(3.25 - 3.66)	25.76(23.43 - 27.45)	3.81(3.49 - 4.05)	54.85(46.83 - 79.75)	19.08(16.25 - 27.72)
North Africa and Middle East	6.00(5.16 - 6.89)	1.40(1.21 - 1.61)	15.46(13.17 - 18.42)	4.05(3.49 - 4.81)	19.09(15.24 - 22.50)	11.71(9.39 - 13.95)
Oceania	0.05(0.04 - 0.06)	0.64(0.50 - 0.85)	0.10(0.08 - 0.13)	1.82(1.44 - 2.27)	0.51(0.38 - 0.65)	24.18(18.15 - 30.53)
South Asia	10.86(9.5 - 12.53)	0.78(0.68 - 0.90)	21.99(19.47 - 24.71)	1.80(1.59 - 2.01)	42.22(35.17 - 54.87)	8.12(6.67 - 10.64)
Southeast Asia	7.53(6.15 - 9.48)	1.27(1.04 - 1.60)	9.03(7.88 - 10.50)	1.76(1.53 - 2.03)	27.21(20.47 - 32.07)	13.56(10.27 - 15.97)

Southern Latin America	4.19(3.81 - 4.58)	5.05(4.59 - 5.51)	3.07(2.81 - 3.30)	3.58(3.28 - 3.86)	10.10(8.38 - 13.38)	29.53(24.42 - 38.78)
Southern Sub - Saharan Africa	0.72(0.65 - 0.78)	1.30(1.18 - 1.40)	1.49(1.31 - 1.66)	2.99(2.64 - 3.32)	7.41(5.82 - 8.41)	45.08(34.35 - 50.53)
Tropical Latin America	4.72(4.41 - 4.99)	1.99(1.85 - 2.10)	5.64(5.12 - 6.03)	2.45(2.21 - 2.62)	23.90(20.37 - 34.73)	25.48(21.50 - 37.14)
Western Europe	34.36(31.51 - 36.30)	3.65(3.40 - 3.83)	50.51(45.16 - 54.46)	4.78(4.32 - 5.14)	95.77(79.23 - 133.05)	21.60(17.88 - 29.78)
Western Sub - Saharan Africa	2.05(1.58 - 2.57)	0.86(0.71 - 1.02)	3.81(2.66 - 4.52)	2.48(1.74 - 2.91)	26.3(14.73 - 35.42)	41.74(23.48 - 55.68)

All data reported as number or rate (95% UI). *ASMR* age - standardized mortality rate; *UI* uncertainty interval

Table S5 Regional DALYs and age - standardized DALYs rate of genitourinary cancers in 2019

Region	Kidney cancer		Bladder cancer		Prostate cancer	
	DALYs ($\times 10^3$)	ASDR per 100,000 population	DALYs ($\times 10^3$)	ASDR per 100,000 population	DALYs ($\times 10^3$)	ASDR per 100,000 population
Andean Latin America	31.13 (24.76 - 38.61)	53.62 (42.59 - 66.39)	16.30 (13.24 - 19.80)	29.49 (24.01 - 35.80)	101.03 (78.16 - 129.24)	397.17 (307.58 - 507.19)
Australasia	35.15 (31.96 - 38.32)	77.88 (71.23 - 84.88)	25.85 (23.07 - 28.72)	50.81 (45.57 - 56.37)	1053.23 (840.97 - 1368.07)	390.42 (323.54 - 552.32)
Caribbean	28.27 (23.13 - 33.70)	56.56 (46.13 - 67.39)	28.60 (24.79 - 33.11)	55.28 (47.89 - 63.99)	429.03 (310.36 - 522.73)	704.84 (565.44 - 866.14)
Central Asia	63.86 (57.32 - 71.31)	75.28 (67.94 - 83.53)	39.20 (35.20 - 43.68)	53.60 (48.20 - 59.36)	1033.62 (897.37 - 1515.66)	209.81 (167.55 - 250.27)
Central Europe	215.43 (189.34 - 243.88)	109.98 (96.51 - 124.60)	230.52 (201.86 - 262.13)	107.36 (93.95 - 122.07)	281.94 (220.71 - 345.22)	357.74 (264.07 - 417.95)
Central Latin America	154.32 (132.28 - 179.83)	63.66 (54.61 - 74.10)	67.32 (57.82 - 78.82)	28.82 (24.72 - 33.71)	81.22 (57.40 - 104.03)	369.29 (289.00 - 482.77)
Central Sub - Saharan Africa	18.59 (13.99 - 24.23)	23.94 (17.95 - 32.55)	33.21 (21.20 - 48.53)	65.11 (40.87 - 95.76)	93.66 (77.67 - 133.44)	469.77 (325.09 - 602.73)
East Asia	679.56 (572.05 - 800.58)	34.98 (29.69 - 40.58)	856.97 (729.75 - 1009.07)	42.44 (36.28 - 49.64)	423.13 (367.76 - 615.83)	120.64 (96.98 - 153.79)
Eastern Europe	376.93 (337.00 - 421.46)	116.44 (104.17 - 129.80)	231.53 (203.47 - 260.69)	67.13 (59.15 - 75.53)	378.32 (297.27 - 494.09)	336.41 (244.51 - 407.66)
Eastern Sub - Saharan Africa	76.89 (62.81 - 95.71)	32.81 (27.10 - 40.54)	84.04 (71.43 - 99.34)	53.51 (45.83 - 62.70)	482.04 (271.56 - 654.18)	432.87 (342.49 - 523.92)

High - income Asia Pacific	168.35 (153.45 - 178.77)	43.16 (40.29 - 45.66)	185.46 (162.08 - 202.86)	38.74 (34.73 - 42.25)	143.41 (113.29 - 165.24)	138.04 (112.79 - 177.07)
High - income North America	481.34 (453.06 - 506.24)	82.97 (78.32 - 87.12)	433.84 (405.14 - 458.84)	68.46 (64.26 - 72.24)	1499.83 (1261.99 - 2106.39)	355.25 (308.31 - 519.22)
North Africa and Middle East	183.63 (157.59 - 211.82)	37.23 (32.00 - 42.58)	378.67 (314.9 - 461.35)	86.17 (72.35 - 103.57)	166.52 (133.66 - 205.11)	186.81 (147.72 - 219.52)
Oceania	1.86 (1.43 - 2.44)	18.40 (14.46 - 24.04)	2.82 (2.18 - 3.68)	38.55 (30.03 - 49.23)	510.04 (381.79 - 602.06)	375.63 (279.62 - 475.23)
South Asia	314.86 (276.23 - 363.81)	20.64 (18.14 - 23.83)	487.70 (432.73 - 550.47)	35.29 (31.13 - 39.71)	345.76 (270.78 - 404.98)	127.05 (105.59 - 164.67)
Southeast Asia	225.24 (181.85 - 284.4)	34.79 (28.13 - 43.89)	194.86 (169.28 - 229.27)	33.19 (28.9 - 38.79)	329.83 (243.66 - 384.77)	218.62 (164.66 - 257.14)
Southern Latin America	99.60 (90.78 - 108.56)	124.32 (113.32 - 135.49)	56.96 (52.39 - 61.51)	68.01 (62.64 - 73.45)	298.74 (243.71 - 380.29)	462.58 (387.30 - 614.38)
Southern Sub - Saharan Africa	21.00 (18.90 - 22.96)	33.41 (30.19 - 36.36)	34.67 (30.37 - 39.31)	61.06 (53.81 - 68.9)	165.74 (139.82 - 220.45)	726.31 (574.70 - 822.50)
Tropical Latin America	126.91 (119.97 - 133.49)	53.24 (50.28 - 56.02)	109.22 (101.21 - 116.27)	45.60 (42.20 - 48.57)	763.89 (633.04 - 986.04)	417.24 (360.53 - 605.72)
Western Europe	654.12 (615.23 - 685.90)	81.41 (77.10 - 85.24)	805.53 (736.60 - 871.05)	86.82 (80.17 - 93.93)	53.79 (43.94 - 64.79)	349.18 (293.71 - 489.54)
Western Sub - Saharan Africa	95.78 (65.68 - 131.11)	26.58 (20.61 - 33.10)	89.31 (61.20 - 107.24)	48.18 (33.36 - 57.22)	10.10 (7.47 - 12.93)	661.04 (370.00 - 891.73)

All data reported as number or rate (95% UI). *DALYs* disability - adjusted life - years; *ASDR* age - standardized DALYs rate; *UI* uncertainty interval

Table S6 Incidence, mortality and DALYs of genitourinary cancers among the top three and bottom three countries in 2019

Measure	Type	Sex	Top three countries			Bottom three countries			
Incident cases	Kidney cancer	Both	USA (61,541.43)	China (59,826.74)	Russian Federation (22,381.03)	Tuvalu (0.17)	Niue (0.06)	Tokelau (0.02)	
		Male	China (42,553.79)	USA (40,685.52)	Russian Federation (12,868.30)	Tuvalu (0.11)	Niue (0.05)	Tokelau (0.01)	
		Female	USA (20,855.90)	China (17,272.96)	Russian Federation (9512.73)	Nauru (0.16)	Niue (0.02)	Tokelau (0.01)	
	Bladder cancer	Both	China (100,020.20)	USA (49,737.46)	Italy (28,608.02)	Nauru (0.22)	Niue (0.09)	Tokelau (0.04)	
		Male	China (82,680.76)	USA (35,559.27)	Italy (23,003.22)	Nauru (0.13)	Niue (0.06)	Tokelau (0.02)	
		Female	China (17,339.44)	USA (14,178.18)	Japan (7249.58)	Nauru (0.09)	Niue (0.03)	Tokelau (0.02)	
	Prostate cancer	Male	USA (308,584.29)	China (153,447.62)	Germany (75,379.81)	Niue (0.50)	Nauru (0.48)	Tokelau (0.19)	
	Deaths	Kidney cancer	Both	China (23,954.24)	USA (19,753.06)	Russian Federation (10,193.69)	Nauru (0.07)	Niue (0.03)	Tokelau (0.01)
			Male	China (16,883.05)	USA (13,021.69)	Russian Federation (6152.43)	Nauru (0.05)	Niue (0.02)	Tokelau (0.01)
Female			China (7071.19)	USA (6731.37)	Russian Federation (4041.27)	Nauru (0.05)	Niue (0.02)	Tokelau (0.01)	
Bladder cancer		Both	China (40,094.24)	USA (22,767.44)	India (14,506.57)	Nauru (0.09)	Niue (0.05)	Tokelau (0.02)	
		Male	China (31,504.64)	USA (16,352.97)	India (10,060.67)	Nauru (0.05)	Niue (0.03)	Tokelau (0.01)	
		Female	China	USA	India	Nauru	Niue	Tokelau	

			(8589.60)	(6414.47)	(4445.90)	(0.04)	(0.02)	(0.01)
	Prostate cancer	Male	China (54,390.88)	USA (48,323.44)	India (32,107.15)	Niue (0.27)	Nauru (0.26)	Tokelau (0.13)
DALYs	Kidney cancer	Both	China (642,799.34)	USA (434,447.43)	Russian Federation (253,081.09)	Tuvalu (2.65)	Niue (0.74)	Tokelau (0.32)
		Male	China (462,868.56)	USA (297,788.77)	Russian Federation (163,234.37)	Tuvalu (1.75)	Niue (0.56)	Tokelau (0.18)
		Female	China (179,930.77)	USA (136,658.66)	Russian Federation (89,846.73)	Nauru (0.78)	Niue (0.18)	Tokelau (0.13)
	Bladder cancer	Both	China (816,119.14)	USA (384,236.57)	India (313,585.91)	Nauru (2.88)	Niue (0.98)	Tokelau (0.53)
		Male	China (651,102.48)	USA (281,706.04)	India (217,921.25)	Nauru (1.64)	Niue (0.60)	Tokelau (0.27)
		Female	China (165,016.66)	USA (102,530.53)	India (95,664.65)	Palau (1.11)	Niue (0.38)	Tokelau (0.26)
	Prostate cancer	Male	China (1,002,594.87)	USA (926,634.87)	India (580,128.20)	Nauru (6.09)	Niue (4.59)	Tokelau (2.15)
ASIR (1/10⁵)	Kidney cancer	Both	Czechia (15.66)	Estonia (12.96)	Iceland (12.54)	Bangladesh (0.86)	Papua New Guinea (0.79)	Niger (0.74)
		Male	Czechia (22.25)	Estonia (19.85)	Lithuania (18.89)	Kenya (0.98)	Papua New Guinea (0.98)	Niger (0.79)
		Female	Czechia (10.12)	Monaco (8.50)	Finland (8.27)	Bangladesh (0.65)	Central African Republic (0.61)	Papua New Guinea (0.59)
	Bladder cancer	Both	Monaco (31.92)	Lebanon (30.18)	San Marino (25.29)	Bangladesh (1.59)	Guatemala (1.53)	Nigeria (1.39)
		Male	Monaco (54.30)	Lebanon (53.97)	San Marino (44.73)	Bangladesh (2.26)	Guatemala (2.00)	Nigeria (1.91)
		Female	Monaco	Lebanon	Zimbabwe	Nigeria	Philippines	Bangladesh

			(12.54)	(10.75)	(9.64)	(0.91)	(0.91)	(0.85)
	Prostate cancer	Male	Saint Kitts and Nevis (235.26)	United States Virgin Islands (202.78)	Dominica (195.69)	Nepal (9.80)	India (8.91)	Bangladesh (8.87)
ASMR (1/10⁵)	Kidney cancer	Both	Uruguay (6.56)	Czechia (6.42)	Greenland (6.31)	Bangladesh (0.59)	Niger (0.55)	Papua New Guinea (0.49)
		Male	Uruguay (10.37)	Czechia (9.67)	Lithuania (9.06)	Bangladesh (0.76)	Papua New Guinea (0.63)	Niger (0.59)
		Female	Greenland (4.55)	Czechia (3.92)	Uruguay (3.73)	Vanuatu (0.45)	Bangladesh (0.41)	Papua New Guinea (0.34)
	Bladder cancer	Both	Lebanon (10.38)	Mali (10.06)	Monaco (9.44)	El Salvador (1.11)	Albania (1.08)	Palau (1.03)
		Male	Lebanon (17.45)	Monaco (16.05)	Mali (14.73)	Guatemala (1.50)	El Salvador (1.49)	Albania (1.47)
		Female	Zimbabwe (7.92)	Malawi (6.16)	Qatar (5.15)	Turkmenistan (0.64)	Sri Lanka (0.62)	Palau (0.59)
	Prostate cancer	Male	Dominica (126.28)	Grenada (98.79)	Saint Kitts and Nevis (97.13)	India (7.75)	Sri Lanka (7.39)	Egypt (7.01)
ASDR (1/10⁵)	Kidney cancer	Both	Uruguay (166.63)	Greenland (148.46)	Czechia (144.85)	Niger (16.95)	Bangladesh (15.62)	Papua New Guinea (14.81)
		Male	Uruguay (254.19)	Lithuania (219.46)	Ukraine (215.93)	Bangladesh (19.56)	Niger (19.44)	Papua New Guinea (18.72)
		Female	Greenland (104.13)	Uruguay (95.31)	Czechia (84.77)	Vanuatu (12.57)	Bangladesh (11.41)	Papua New Guinea (10.59)
	Bladder cancer	Both	Egypt (201.75)	Mali (197.04)	Lebanon (192.75)	El Salvador (20.82)	Guatemala (20.77)	Albania (20.70)
		Male	Lebanon (322.16)	Egypt (310.81)	Monaco (288.99)	Albania (27.67)	El Salvador (27.59)	Guatemala (26.30)

	Female	Zimbabwe (164.14)	Malawi (121.52)	Mali (103.32)	Paraguay (11.94)	Palau (11.13)	Sri Lanka (10.91)
Prostate cancer	Male	Dominica (1923.95)	Saint Kitts and Nevis (1607.79)	Grenada (1596.00)	Egypt (119.06)	China (118.94)	Bangladesh (118.34)

DALYs disability-adjusted life-years; *ASIR* age-standardized incidence rate; *ASMR* age-standardized mortality rate; *ASDR* age-standardized DALYs rate

Table S7 EAPC of ASMR for genitourinary cancers in 204 countries and territories from 1990 to 2019

Location	EAPC (95% CI)		
	Kidney cancer	Bladder cancer	Prostate cancer
Afghanistan	0.89(0.67 - 1.10)	-0.44(-0.47 to -0.40)	0.26(0.21 - 0.32)
Albania	2.14(1.83 - 2.46)	-0.28(-0.44 to -0.12)	-0.10(-0.22 - 0.01)
Algeria	0.69(0.57 - 0.82)	-0.75(-1.06 to -0.43)	-0.67(-0.71 to -0.62)
American Samoa	0.01(-0.34 - 0.35)	1.58(1.29 - 1.87)	0.24(0.11 - 0.36)
Andorra	0.15(0.09 - 0.21)	-0.95(-1.01 to -0.89)	-0.58(-0.63 to -0.53)
Angola	1.26(1.14 - 1.37)	-0.22(-0.27 to -0.18)	0.75(0.71 - 0.79)
Antigua and Barbuda	-0.54(-0.98 to -0.10)	0.67(0.44 - 0.89)	0.25(-0.10 - 0.59)
Argentina	-0.31(-0.54 to -0.08)	-1.10(-1.20 to -1.00)	-0.22(-0.46 - 0.03)
Armenia	5.74(4.84 - 6.65)	-0.05(-0.27 - 0.16)	1.75(1.63 - 1.86)
Australia	-0.53(-0.62 to -0.44)	-1.05(-1.17 to -0.93)	-1.48(-1.63 to -1.33)
Austria	-1.37(-1.47 to -1.26)	-1.02(-1.11 to -0.94)	-1.41(-1.57 to -1.25)
Azerbaijan	0.32(0.04 - 0.60)	0.83(0.72 - 0.94)	0.92(0.81 - 1.04)
Bahamas	-0.69(-0.94 to -0.43)	0.21(0.08 - 0.33)	-0.01(-0.20 - 0.18)
Bahrain	-0.90(-1.34 to -0.46)	-1.87(-2.09 to -1.65)	-0.46(-0.72 to -0.19)
Bangladesh	0.56(0.44 - 0.69)	-0.30(-0.48 to -0.12)	-0.44(-0.61 to -0.26)
Barbados	-0.87(-1.20 to -0.54)	0.37(0.26 - 0.49)	0.01(-0.32 - 0.34)
Belarus	3.88(2.90 - 4.86)	-1.41(-1.86 to -0.95)	0.62(0.44 - 0.80)
Belgium	-0.11(-0.33 - 0.12)	-1.15(-1.43 to -0.88)	-2.16(-2.27 to -2.04)

Belize	-0.14(-0.27 - 0.01)	0.79(0.43 - 1.15)	0.81(0.24 - 1.39)
Benin	1.34(1.21 - 1.48)	-1.90(-2.03 to -1.78)	1.86(1.68 - 2.03)
Bermuda	-2.00(-2.42 to -1.58)	-0.91(-1.09 to -0.72)	-0.26(-0.36 to -0.17)
Bhutan	2.22(2.15 - 2.30)	0.85(0.80 - 0.89)	1.04(0.98 - 1.10)
Bolivia (Plurinational State of)	1.58(1.53 - 1.64)	0.15(0.06 - 0.25)	0.80(0.74 - 0.85)
Bosnia and Herzegovina	2.28(2.01 - 2.55)	1.59(1.36 - 1.81)	1.30(1.04 - 1.56)
Botswana	1.43(1.02 - 1.83)	-0.31(-0.59 to -0.02)	0.22(-0.20 - 0.64)
Brazil	1.15(1.05 - 1.24)	-0.41(-0.45 to -0.37)	-0.28(-0.51 to -0.05)
Brunei Darussalam	1.70(1.47 - 1.93)	-0.08(-0.25 - 0.09)	1.93(1.48 - 2.38)
Bulgaria	5.83(4.92 - 6.75)	2.15(1.74 - 2.57)	2.07(1.78 - 2.36)
Burkina Faso	1.26(1.14 - 1.38)	-2.19(-2.42 to -1.95)	1.93(1.82 - 2.05)
Burundi	0.27(0.21 - 0.33)	-1.59(-1.72 to -1.47)	-0.19(-0.25 to -0.14)
Cabo Verde	4.32(3.65 - 4.99)	2.58(1.87 - 3.30)	2.53(1.74 - 3.33)
Cambodia	1.50(1.44 - 1.57)	-0.09(-0.27 - 0.08)	1.18(1.11 - 1.25)
Cameroon	0.82(0.77 - 0.86)	-1.12(-1.23 to -1.01)	1.90(1.74 - 2.06)
Canada	1.04(0.78 - 1.30)	-0.98(-1.07 to -0.88)	-2.30(-2.52 to -2.08)
Central African Republic	0.26(0.17 - 0.35)	-0.90(-0.95 to -0.86)	0.01(-0.03 - 0.05)
Chad	1.36(1.29 - 1.43)	-0.59(-0.72 to -0.47)	2.27(2.07 - 2.48)
Chile	0.62(0.51 - 0.73)	-0.03(-0.11 - 0.06)	0.31(0.05 - 0.57)
China	2.79(2.35 - 3.24)	-0.53(-0.58 to -0.49)	-0.22(-0.26 to -0.17)
Colombia	0.62(0.53 - 0.71)	-1.66(-1.80 to -1.52)	-1.20(-1.44 to -0.96)
Comoros	1.10(1.00 - 1.19)	-0.44(-0.56 to -0.32)	0.10(0.02 - 0.17)

Congo	0.46(0.28 - 0.65)	-0.56(-0.77 to -0.35)	0.01(-0.14 - 0.15)
Cook Islands	0.08(-0.07 - 0.23)	-0.04(-0.21 - 0.13)	-0.84(-0.90 to -0.77)
Costa Rica	1.79(1.59 - 1.99)	-0.46(-0.63 to -0.30)	0.63(0.30 - 0.96)
Croatia	3.85(3.22 - 4.48)	0.44(0.30 - 0.57)	0.30(0.12 - 0.47)
Cuba	-0.77(-1.20 to -0.32)	0.46(0.32 - 0.60)	0.62(0.55 - 0.70)
Cyprus	2.66(2.33 - 3.00)	-0.45(-0.66 to -0.24)	0.25(-0.13 - 0.64)
Czechia	0.60(0.14 - 1.06)	-0.48(-0.59 to -0.38)	-0.30(-0.58 to -0.03)
Cote d'Ivoire	0.62(0.52 - 0.72)	-1.80(-1.94 to -1.66)	1.67(1.51 - 1.83)
Democratic People's Republic of Korea	0.58(0.51 - 0.66)	-0.44(-0.49 to -0.40)	0.20(0.10 - 0.30)
Democratic Republic of the Congo	-0.13(-0.39 - 0.14)	-1.37(-1.56 to -1.18)	0.14(0.10 - 0.18)
Denmark	0.53(-0.02 - 1.08)	-0.76(-1.20 to -0.31)	-0.46(-0.65 to -0.27)
Djibouti	2.30(2.19 - 2.41)	0.20(0.16 - 0.24)	0.46(0.42 - 0.50)
Dominica	-0.10(-0.46 - 0.26)	0.78(0.66 - 0.91)	0.70(0.52 - 0.88)
Dominican Republic	2.11(1.57 - 2.66)	1.50(1.29 - 1.71)	1.42(0.86 - 1.99)
Ecuador	1.93(1.54 - 2.33)	0.56(0.25 - 0.87)	0.81(0.59 - 1.03)
Egypt	1.80(1.63 - 1.96)	0.34(0.23 - 0.45)	0.23(0.07 - 0.39)
El Salvador	1.43(1.28 - 1.58)	0.24(0.11 - 0.37)	0.92(0.49 - 1.34)
Equatorial Guinea	3.93(3.70 - 4.17)	1.11(0.94 - 1.27)	1.29(1.21 - 1.36)
Eritrea	1.81(1.52 - 2.11)	0.11(-0.10 - 0.33)	0.12(-0.12 - 0.36)
Estonia	3.67(2.91 - 4.43)	-0.10(-0.28 - 0.07)	1.47(1.22 - 1.71)
Eswatini	1.50(0.79 - 2.21)	0.37(0.12 - 0.62)	0.87(0.62 - 1.12)
Ethiopia	0.44(0.18 - 0.71)	-0.51(-0.60 to -0.42)	0.73(0.63 - 0.83)

Fiji	0.44(0.31 - 0.57)	1.03(0.79 - 1.27)	0.70(0.52 - 0.87)
Finland	-0.29(-0.37 to -0.21)	-1.29(-1.37 to -1.20)	-1.32(-1.49 to -1.16)
France	-0.15(-0.24 to -0.05)	-0.89(-0.92 to -0.86)	-2.17(-2.35 to -2.00)
Gabon	1.53(1.44 - 1.62)	-0.35(-0.43 to -0.27)	0.57(0.53 - 0.62)
Gambia	1.41(1.26 - 1.57)	0.49(0.36 - 0.61)	0.73(0.64 - 0.82)
Georgia	2.09(1.62 - 2.56)	2.13(1.75 - 2.51)	2.53(1.95 - 3.11)
Germany	-0.09(-0.21 - 0.04)	-1.30(-1.58 to -1.01)	-1.12(-1.28 to -0.96)
Ghana	-0.05(-0.33 - 0.22)	-1.22(-1.39 to -1.04)	-0.36(-0.54 to -0.18)
Greece	-0.05(-0.25 - 0.14)	-1.10(-1.24 to -0.96)	-1.09(-1.38 to -0.79)
Greenland	1.30(0.94 - 1.67)	-1.20(-1.32 to -1.08)	0.03(-0.06 - 0.12)
Grenada	0.06(-0.40 - 0.52)	0.66(0.47 - 0.84)	0.89(0.06 - 1.73)
Guam	-1.20(-1.51 to -0.90)	0.10(-0.18 - 0.39)	-0.78(-1.14 to -0.42)
Guatemala	1.52(0.99 - 2.06)	-0.71(-0.83 to -0.59)	1.66(0.96 - 2.36)
Guinea	1.07(1.01 - 1.14)	0.40(0.31 - 0.49)	0.97(0.82 - 1.12)
Guinea-Bissau	0.54(0.46 - 0.62)	-1.44(-1.55 to -1.33)	1.91(1.76 - 2.05)
Guyana	-0.42(-0.70 to -0.15)	0.19(0.11 - 0.26)	0.21(0.05 - 0.36)
Haiti	-0.57(-0.85 to -0.29)	-0.14(-0.26 to -0.02)	0.20(0.18 - 0.22)
Honduras	2.59(2.43 - 2.76)	1.73(1.54 - 1.93)	1.65(1.32 - 1.98)
Hungary	-0.13(-0.43 - 0.18)	-0.15(-0.32 - 0.02)	-0.90(-1.08 to -0.71)
Iceland	-0.21(-0.45 - 0.04)	-1.37(-1.50 to -1.25)	-1.07(-1.30 to -0.85)
India	1.30(1.20 - 1.40)	-0.26(-0.37 to -0.14)	-0.29(-0.39 to -0.18)
Indonesia	2.50(2.44 - 2.57)	0.56(0.50 - 0.62)	1.92(1.83 - 2.01)

Iran (Islamic Republic of)	1.23(1.00 - 1.46)	0.18(0.12 - 0.24)	0.51(0.31 - 0.72)
Iraq	1.54(1.27 - 1.80)	0.97(0.72 - 1.23)	0.63(0.49 - 0.77)
Ireland	0.74(0.48 - 1.01)	-0.59(-0.78 to -0.39)	-1.27(-1.50 to -1.05)
Israel	-0.22(-0.48 - 0.05)	-0.57(-0.75 to -0.38)	-1.74(-1.99 to -1.49)
Italy	-0.12(-0.17 to -0.07)	-1.29(-1.36 to -1.22)	-1.02(-1.21 to -0.82)
Jamaica	-0.85(-1.32 to -0.37)	-0.40(-0.69 to -0.11)	1.90(1.34 - 2.46)
Japan	0.38(0.24 - 0.51)	-0.60(-0.68 to -0.53)	-0.50(-0.59 to -0.42)
Jordan	2.33(2.09 - 2.58)	-0.39(-0.53 to -0.26)	0.31(0.06 - 0.57)
Kazakhstan	0.06(-0.37 - 0.50)	-0.50(-0.92 to -0.08)	0.67(0.53 - 0.81)
Kenya	2.88(2.68 - 3.09)	1.40(1.21 - 1.58)	1.98(1.77 - 2.19)
Kiribati	0.19(-0.05 - 0.42)	-0.07(-0.10 to -0.03)	-0.40(-0.58 to -0.23)
Kuwait	0.26(-0.30 - 0.82)	-0.10(-0.46 - 0.27)	0.94(0.59 - 1.28)
Kyrgyzstan	1.31(0.83 - 1.79)	-0.38(-0.73 to -0.03)	-0.83(-1.04 to -0.62)
Lao People's Democratic Republic	0.95(0.91 - 0.98)	-0.82(-0.96 to -0.67)	0.41(0.36 - 0.45)
Latvia	3.65(2.92 - 4.38)	0.74(0.51 - 0.97)	1.82(1.45 - 2.19)
Lebanon	2.73(2.48 - 2.99)	-0.44(-0.49 to -0.39)	0.70(0.57 - 0.83)
Lesotho	2.96(2.76 - 3.16)	1.42(1.25 - 1.58)	1.31(1.08 - 1.55)
Liberia	1.10(0.62 - 1.59)	-1.96(-2.06 to -1.86)	1.80(1.62 - 1.99)
Libya	1.37(1.24 - 1.50)	0.14(0.02 - 0.26)	0.29(0.21 - 0.37)
Lithuania	3.42(2.69 - 4.16)	-0.48(-0.71 to -0.25)	1.79(1.28 - 2.31)
Luxembourg	-0.91(-1.01 to -0.82)	-1.10(-1.15 to -1.04)	-2.11(-2.21 to -2.01)
Madagascar	0.87(0.80 - 0.94)	-1.21(-1.38 to -1.04)	-0.38(-0.52 to -0.25)

Malawi	1.06(0.97 - 1.16)	-0.22(-0.31 to -0.14)	0.86(0.75 - 0.98)
Malaysia	1.54(1.42 - 1.67)	-0.5(-0.77 to -0.23)	0.02(-0.22 - 0.25)
Maldives	0.75(0.53 - 0.97)	-1.47(-1.59 to -1.34)	0.06(-0.03 - 0.16)
Mali	1.14(1.07 - 1.20)	-0.08(-0.15 to -0.01)	0.70(0.66 - 0.75)
Malta	0.20(0.05 - 0.35)	-1.50(-1.58 to -1.42)	-1.41(-1.55 to -1.27)
Marshall Islands	0.57(0.45 - 0.68)	0.54(0.42 - 0.66)	0.01(-0.20 - 0.22)
Mauritania	0.43(0.35 - 0.51)	-1.92(-2.03 to -1.81)	1.55(1.39 - 1.70)
Mauritius	1.67(1.41 - 1.93)	-1.65(-1.92 to -1.38)	0.27(-0.05 - 0.60)
Mexico	1.07(1.00 - 1.15)	-0.32(-0.40 to -0.23)	-0.17(-0.28 to -0.07)
Micronesia (Federated States of)	0.26(0.13 - 0.39)	0.57(0.53 - 0.62)	0.55(0.47 - 0.64)
Monaco	0.89(0.70 - 1.09)	0.71(0.67 - 0.75)	-0.29(-0.36 to -0.22)
Mongolia	3.14(2.85 - 3.42)	-2.80(-3.24 to -2.36)	0.01(-0.15 - 0.16)
Montenegro	1.38(1.30 - 1.46)	0.51(0.43 - 0.58)	0.81(0.72 - 0.89)
Morocco	1.77(1.56 - 1.99)	0.58(0.30 - 0.86)	0.60(0.16 - 1.05)
Mozambique	2.43(2.29 - 2.56)	-0.15(-0.27 to -0.03)	1.17(1.11 - 1.23)
Myanmar	1.51(1.44 - 1.58)	-0.73(-0.79 to -0.67)	0.76(0.73 - 0.78)
Namibia	1.71(1.49 - 1.92)	0.27(0.06 - 0.47)	2.08(1.95 - 2.21)
Nauru	-0.33(-0.49 to -0.16)	0.30(0.18 - 0.41)	0.58(0.44 - 0.72)
Nepal	2.41(2.17 - 2.65)	0.56(0.43 - 0.68)	0.97(0.83 - 1.12)
Netherlands	0.32(0.15 - 0.48)	-0.39(-0.56 to -0.23)	-0.99(-1.14 to -0.84)
New Zealand	0.09(-0.05 - 0.23)	-1.47(-1.65 to -1.30)	-1.61(-1.78 to -1.44)
Nicaragua	2.12(1.81 - 2.44)	0.14(-0.23 - 0.52)	0.58(0.36 - 0.79)

Niger	0.03(-0.06 - 0.11)	-1.61(-1.75 to -1.48)	2.13(1.96 - 2.30)
Nigeria	1.29(1.21 - 1.38)	0.75(0.63 - 0.87)	1.17(1.05 - 1.30)
Niue	0.70(0.50 - 0.89)	0.32(0.25 - 0.39)	0.62(0.57 - 0.67)
North Macedonia	4.18(3.66 - 4.71)	0.66(0.46 - 0.86)	1.53(1.32 - 1.74)
Northern Mariana Islands	-0.32(-0.77 - 0.14)	3.22(2.62 - 3.84)	1.20(0.98 - 1.42)
Norway	0.29(0.10 - 0.47)	-1.10(-1.16 to -1.04)	-0.90(-1.08 to -0.73)
Oman	2.94(2.62 - 3.25)	0.70(0.51 - 0.90)	0.48(0.36 - 0.60)
Pakistan	2.01(1.76 - 2.26)	0.48(0.35 - 0.60)	0.55(0.41 - 0.69)
Palau	0.69(0.50 - 0.89)	0.05(-0.01 - 0.10)	-0.08(-0.15 to -0.01)
Palestine	1.11(0.92 - 1.30)	-0.56(-0.63 to -0.49)	-0.15(-0.28 to -0.01)
Panama	2.57(2.37 - 2.77)	-1.19(-1.38 to -1.01)	0.47(0.02 - 0.93)
Papua New Guinea	0.56(0.47 - 0.65)	0.92(0.87 - 0.96)	1.08(1.02 - 1.14)
Paraguay	0.43(0.30 - 0.55)	0.61(0.49 - 0.73)	1.18(0.78 - 1.59)
Peru	0.01(-0.23 - 0.25)	-0.70(-0.86 to -0.53)	0.21(0.07 - 0.36)
Philippines	0.59(0.39 - 0.79)	-0.78(-1.01 to -0.55)	-0.20(-0.40 - 0.01)
Poland	3.76(2.78 - 4.74)	0.44(0.29 - 0.60)	0.67(0.38 - 0.96)
Portugal	0.05(-0.16 - 0.25)	-0.46(-0.53 to -0.39)	-1.56(-1.76 to -1.36)
Puerto Rico	-0.23(-0.44 to -0.01)	-0.42(-0.56 to -0.29)	-1.41(-1.54 to -1.28)
Qatar	1.12(0.80 - 1.44)	1.99(1.70 - 2.28)	1.02(0.57 - 1.47)
Republic of Korea	1.77(1.16 - 2.39)	-1.30(-1.53 to -1.08)	0.14(-0.05 - 0.32)
Republic of Moldova	2.01(1.63 - 2.39)	-0.31(-0.59 to -0.02)	1.39(0.98 - 1.81)
Romania	2.04(1.95 - 2.13)	0.68(0.56 - 0.80)	0.88(0.76 - 1.00)

Russian Federation	0.25(0.02 - 0.48)	-0.62(-0.97 to -0.26)	1.48(1.35 - 1.60)
Rwanda	0.51(0.27 - 0.75)	-1.61(-1.84 to -1.37)	-0.13(-0.33 - 0.08)
Saint Kitts and Nevis	-1.63(-2.15 to -1.10)	-0.09(-0.27 - 0.08)	0.64(0.52 - 0.77)
Saint Lucia	-1.32(-1.77 to -0.87)	-0.63(-0.88 to -0.37)	-0.64(-0.88 to -0.40)
Saint Vincent and the Grenadines	-0.85(-1.37 to -0.34)	0.56(0.31 - 0.81)	0.41(0.19 - 0.62)
Samoa	-0.19(-0.30 to -0.09)	0.03(-0.02 - 0.08)	-0.57(-0.76 to -0.38)
San Marino	0.67(0.58 - 0.75)	-0.05(-0.13 - 0.04)	-0.51(-0.55 to -0.46)
Sao Tome and Principe	1.30(1.06 - 1.53)	1.18(1.11 - 1.25)	1.39(1.23 - 1.55)
Saudi Arabia	2.57(2.32 - 2.83)	-1.11(-1.46 to -0.77)	-1.04(-1.28 to -0.80)
Senegal	0.89(0.72 - 1.06)	-1.34(-1.44 to -1.25)	2.09(1.90 - 2.27)
Serbia	1.39(1.24 - 1.54)	0.67(0.57 - 0.78)	1.39(1.13 - 1.65)
Seychelles	0.75(0.30 - 1.21)	0.14(-0.06 - 0.34)	1.05(0.72 - 1.38)
Sierra Leone	0.81(0.65 - 0.97)	-2.25(-2.42 to -2.08)	1.94(1.77 - 2.12)
Singapore	0.14(-0.01 - 0.30)	-2.31(-2.55 to -2.07)	-0.63(-0.81 to -0.45)
Slovakia	1.79(1.44 - 2.13)	0.05(-0.2 - 0.31)	0.73(0.57 - 0.88)
Slovenia	1.89(1.56 - 2.22)	-0.21(-0.36 to -0.05)	0.67(0.38 - 0.95)
Solomon Islands	0.52(0.29 - 0.75)	0.71(0.64 - 0.77)	0.67(0.63 - 0.71)
Somalia	0.80(0.71 - 0.89)	-0.38(-0.41 to -0.34)	-0.07(-0.13 to -0.02)
South Africa	0.73(0.53 - 0.93)	-0.20(-0.48 - 0.08)	0.64(0.42 - 0.86)
South Sudan	0.82(0.74 - 0.90)	-0.33(-0.39 to -0.27)	-0.04(-0.07 - 0.01)
Spain	0.78(0.72 - 0.83)	-0.73(-0.79 to -0.67)	-1.6(-1.74 to -1.46)
Sri Lanka	-2.14(-3.12 to -1.14)	1.28(1.00 - 1.55)	0.17(0.03 - 0.31)

Sudan	2.72(2.40 - 3.04)	-0.55(-0.70 to -0.41)	0.68(0.61 - 0.74)
Suriname	-0.27(-0.69 - 0.16)	0.58(0.35 - 0.81)	0.83(0.61 - 1.05)
Sweden	-1.14(-1.26 to -1.02)	0.05(-0.02 - 0.11)	-1.15(-1.39 to -0.92)
Switzerland	0.65(0.09 - 1.21)	0.23(-0.09 - 0.56)	-2.05(-2.18 to -1.92)
Syrian Arab Republic	1.24(1.05 - 1.43)	0.26(0.15 - 0.37)	0.12(-0.01 - 0.26)
Taiwan (Province of China)	3.80(3.14 - 4.46)	-0.06(-0.23 - 0.11)	1.23(1.15 - 1.32)
Tajikistan	0.87(0.57 - 1.16)	1.10(0.98 - 1.23)	1.27(1.18 - 1.37)
Thailand	-0.08(-0.41 - 0.24)	-2.73(-3.06 to -2.40)	-0.73(-0.86 to -0.61)
Timor-Leste	2.15(1.92 - 2.39)	0.42(0.19 - 0.65)	1.83(1.69 - 1.96)
Togo	0.63(0.55 - 0.71)	-2.19(-2.36 to -2.02)	1.96(1.81 - 2.11)
Tokelau	0.80(0.71 - 0.89)	0.18(0.16 - 0.20)	0.29(0.24 - 0.34)
Tonga	0.64(0.18 - 1.11)	0.65(0.50 - 0.80)	0.15(-0.02 - 0.32)
Trinidad and Tobago	-2.35(-2.88 to -1.82)	-0.43(-0.79 to -0.07)	-0.56(-0.76 to -0.36)
Tunisia	1.44(1.40 - 1.48)	-0.43(-0.54 to -0.33)	0.25(0.19 - 0.30)
Turkey	0.58(0.50 - 0.66)	-0.18(-0.35 to -0.02)	-0.15(-0.66 - 0.37)
Turkmenistan	3.61(3.18 - 4.05)	1.34(1.12 - 1.56)	0.09(0.01 - 0.18)
Tuvalu	0.21(0.07 - 0.35)	0.20(0.17 - 0.24)	0.03(-0.05 - 0.11)
Uganda	3.16(2.90 - 3.42)	0.11(0.03 - 0.20)	1.05(0.88 - 1.21)
Ukraine	0.92(0.70 - 1.13)	0.14(-0.08 - 0.36)	-0.18(-0.39 - 0.04)
United Arab Emirates	1.63(1.31 - 1.95)	-1.18(-1.63 to -0.73)	-0.39(-0.69 to -0.08)
United Kingdom	0.39(0.32 - 0.45)	-1.06(-1.22 to -0.90)	-0.80(-0.89 to -0.70)
United Republic of Tanzania	1.89(1.78 - 2.01)	-0.47(-0.54 to -0.39)	0.10(0.07 - 0.13)

United States of America	-0.32(-0.39 to -0.25)	0.17(0.14 - 0.19)	-1.78(-1.94 to -1.62)
United States Virgin Islands	1.22(0.92 - 1.51)	1.54(1.19 - 1.89)	1.15(0.95 - 1.36)
Uruguay	-0.02(-0.16 - 0.12)	-0.81(-0.91 to -0.72)	-0.11(-0.41 - 0.20)
Uzbekistan	3.01(2.81 - 3.20)	1.82(1.50 - 2.14)	1.83(1.47 - 2.19)
Vanuatu	0.53(0.42 - 0.64)	1.04(0.92 - 1.15)	0.63(0.58 - 0.69)
Venezuela (Bolivarian Republic of)	0.16(-0.20 - 0.52)	-0.02(-0.18 - 0.15)	0.60(0.16 - 1.05)
Viet Nam	2.05(1.96 - 2.15)	0.68(0.63 - 0.74)	0.87(0.83 - 0.91)
Yemen	1.64(1.52 - 1.76)	0.16(0.08 - 0.24)	0.86(0.77 - 0.95)
Zambia	1.33(1.27 - 1.38)	-0.47(-0.52 to -0.41)	0.17(0.07 - 0.27)
Zimbabwe	1.12(0.70 - 1.54)	0.54(0.32 - 0.76)	0.73(0.38 - 1.08)

ASMR age-standardized mortality rate; *EAPC* estimated annual percentage change; *CI* confidence interval

Table S8 EAPC of ASDR for genitourinary cancers in 204 countries and territories from 1990 to 2019

Location	EAPC (95% CI)		
	Kidney cancer	Bladder cancer	Prostate cancer
Afghanistan	0.62(0.41 - 0.84)	-0.52(-0.54 to -0.49)	0.23(0.18 - 0.29)
Albania	2.13(1.80 - 2.46)	-0.30(-0.47 to -0.14)	-0.10(-0.23 - 0.03)
Algeria	0.66(0.57 - 0.76)	-0.75(-1.03 to -0.48)	-0.67(-0.72 to -0.62)
American Samoa	0.03(-0.32 - 0.39)	1.63(1.33 - 1.93)	0.23(0.10 - 0.35)
Andorra	0.07(-0.01 - 0.15)	-0.93(-0.98 to -0.88)	-0.45(-0.48 to -0.42)
Angola	0.86(0.78 - 0.95)	-0.42(-0.46 to -0.37)	0.61(0.58 - 0.65)
Antigua and Barbuda	-0.66(-1.07 to -0.24)	0.39(0.17 - 0.61)	0.01(-0.33 - 0.35)
Argentina	-0.75(-1.05 to -0.45)	-1.14(-1.24 to -1.04)	-0.28(-0.53 to -0.02)
Armenia	5.22(4.37 - 6.09)	-0.22(-0.46 - 0.02)	1.58(1.46 - 1.70)
Australia	-0.65(-0.73 to -0.56)	-1.43(-1.56 to -1.29)	-1.27(-1.44 to -1.10)
Austria	-1.73(-1.85 to -1.61)	-1.11(-1.20 to -1.03)	-1.28(-1.43 to -1.14)
Azerbaijan	-0.11(-0.38 - 0.17)	0.22(0.13 - 0.31)	0.61(0.51 - 0.71)
Bahamas	-0.74(-1.00 to -0.47)	0.10(-0.04 - 0.23)	-0.02(-0.13 - 0.09)
Bahrain	-1.14(-1.56 to -0.72)	-2.31(-2.53 to -2.09)	-0.67(-0.92 to -0.42)
Bangladesh	0.46(0.38 - 0.54)	-0.48(-0.61 to -0.35)	-0.60(-0.74 to -0.47)
Barbados	-1.01(-1.34 to -0.67)	0.27(0.18 - 0.36)	-0.01(-0.31 - 0.29)
Belarus	3.55(2.58 - 4.52)	-1.59(-2.05 to -1.13)	0.86(0.68 - 1.04)
Belgium	-0.38(-0.61 to -0.15)	-1.34(-1.58 to -1.10)	-1.86(-2.03 to -1.69)

Belize	-0.32(-0.44 to -0.19)	0.91(0.55 - 1.26)	0.82(0.27 - 1.38)
Benin	1.49(1.33 - 1.65)	-1.89(-2.02 to -1.75)	1.69(1.53 - 1.86)
Bermuda	-2.03(-2.46 to -1.60)	-1.06(-1.27 to -0.85)	-0.26(-0.34 to -0.19)
Bhutan	1.83(1.75 - 1.91)	0.40(0.36 - 0.45)	0.91(0.85 - 0.97)
Bolivia (Plurinational State of)	1.07(1.01 - 1.12)	-0.13(-0.23 to -0.03)	0.69(0.64 - 0.75)
Bosnia and Herzegovina	2.04(1.81 - 2.27)	1.32(1.13 - 1.51)	1.26(1.05 - 1.48)
Botswana	1.51(1.08 - 1.93)	-0.32(-0.64 to -0.01)	0.11(-0.35 - 0.58)
Brazil	0.78(0.69 - 0.87)	-0.52(-0.57 to -0.48)	-0.29(-0.54 to -0.04)
Brunei Darussalam	1.45(1.21 - 1.68)	-0.45(-0.63 to -0.27)	1.52(1.13 - 1.91)
Bulgaria	5.71(4.80 - 6.62)	2.06(1.67 - 2.45)	2.03(1.74 - 2.33)
Burkina Faso	1.45(1.32 - 1.58)	-2.15(-2.42 to -1.87)	1.84(1.75 - 1.93)
Burundi	0.04(-0.04 - 0.12)	-1.76(-1.90 to -1.62)	-0.32(-0.38 to -0.27)
Cabo Verde	4.53(3.76 - 5.31)	3.01(2.22 - 3.80)	2.45(1.65 - 3.26)
Cambodia	1.18(1.13 - 1.24)	-0.31(-0.49 to -0.13)	1.05(0.98 - 1.12)
Cameroon	0.87(0.82 - 0.92)	-1.03(-1.14 to -0.91)	1.85(1.69 - 2.00)
Canada	0.69(0.46 - 0.91)	-1.36(-1.47 to -1.26)	-2.35(-2.61 to -2.08)
Central African Republic	0.22(0.12 - 0.32)	-0.95(-1.01 to -0.90)	-0.05(-0.09 - 0.01)
Chad	1.30(1.23 - 1.37)	-0.58(-0.71 to -0.44)	2.20(1.99 - 2.40)
Chile	0.29(0.15 - 0.44)	-0.10(-0.18 to -0.03)	0.13(-0.07 - 0.34)
China	2.28(1.85 - 2.71)	-0.58(-0.64 to -0.53)	-0.24(-0.27 to -0.20)
Colombia	0.66(0.56 - 0.76)	-1.74(-1.87 to -1.60)	-1.12(-1.36 to -0.89)
Comoros	0.94(0.79 - 1.08)	-0.53(-0.69 to -0.37)	0.06(-0.04 - 0.15)

Congo	0.18(0.01 - 0.36)	-0.80(-1.01 to -0.59)	-0.21(-0.37 to -0.05)
Cook Islands	0.18(0.07 - 0.29)	-0.15(-0.33 - 0.03)	-0.85(-0.90 to -0.80)
Costa Rica	1.86(1.63 - 2.09)	-0.59(-0.74 to -0.44)	0.82(0.55 - 1.08)
Croatia	3.37(2.74 - 3.99)	0.22(0.11 - 0.34)	0.24(0.08 - 0.39)
Cuba	-1.16(-1.63 to -0.69)	0.55(0.41 - 0.69)	0.79(0.72 - 0.86)
Cyprus	2.58(2.27 - 2.89)	-0.15(-0.31 - 0.01)	0.19(-0.10 - 0.48)
Czechia	0.09(-0.34 - 0.52)	-0.78(-0.87 to -0.69)	-0.19(-0.46 - 0.09)
Cote d'Ivoire	0.80(0.71 - 0.89)	-1.83(-1.99 to -1.66)	1.52(1.38 - 1.66)
Democratic People's Republic of Korea	0.39(0.31 - 0.48)	-0.38(-0.43 to -0.34)	0.16(0.07 - 0.24)
Democratic Republic of the Congo	-0.38(-0.65 to -0.10)	-1.21(-1.40 to -1.03)	0.10(0.06 - 0.15)
Denmark	0.38(-0.17 - 0.93)	-1.19(-1.63 to -0.75)	-0.47(-0.69 to -0.24)
Djibouti	2.09(1.96 - 2.21)	0.12(0.08 - 0.17)	0.42(0.37 - 0.47)
Dominica	-0.09(-0.42 - 0.25)	0.60(0.48 - 0.72)	0.52(0.38 - 0.65)
Dominican Republic	1.66(1.05 - 2.27)	1.47(1.28 - 1.67)	1.50(1.01 - 2.00)
Ecuador	1.53(1.14 - 1.92)	0.28(0.01 - 0.56)	0.60(0.40 - 0.80)
Egypt	1.46(1.35 - 1.56)	0.14(0.07 - 0.21)	0.35(0.23 - 0.47)
El Salvador	0.97(0.85 - 1.10)	0.16(0.04 - 0.28)	0.88(0.47 - 1.28)
Equatorial Guinea	3.29(3.08 - 3.51)	0.55(0.35 - 0.75)	0.94(0.81 - 1.06)
Eritrea	1.54(1.26 - 1.83)	-0.07(-0.27 - 0.14)	-0.05(-0.29 - 0.19)
Estonia	3.02(2.25 - 3.79)	-0.51(-0.69 to -0.34)	1.46(1.22 - 1.71)
Eswatini	1.56(0.85 - 2.26)	0.38(0.09 - 0.66)	0.86(0.58 - 1.15)
Ethiopia	0.02(-0.24 - 0.29)	-0.98(-1.10 to -0.87)	0.52(0.40 - 0.63)

Fiji	0.50(0.38 - 0.62)	1.16(0.87 - 1.46)	0.60(0.43 - 0.77)
Finland	-0.65(-0.72 to -0.57)	-1.67(-1.76 to -1.58)	-1.06(-1.25 to -0.87)
France	-0.41(-0.51 to -0.32)	-0.99(-1.03 to -0.96)	-1.98(-2.19 to -1.77)
Gabon	1.33(1.23 - 1.43)	-0.49(-0.57 to -0.42)	0.46(0.41 - 0.50)
Gambia	1.07(0.86 - 1.27)	0.43(0.28 - 0.59)	0.71(0.59 - 0.82)
Georgia	1.83(1.39 - 2.27)	2.00(1.66 - 2.35)	2.67(2.07 - 3.27)
Germany	-0.69(-0.80 to -0.57)	-1.44(-1.70 to -1.18)	-0.89(-1.03 to -0.75)
Ghana	-0.70(-1.09 to -0.30)	-1.14(-1.31 to -0.96)	-0.33(-0.52 to -0.15)
Greece	-0.03(-0.15 - 0.10)	-0.97(-1.10 to -0.84)	-0.96(-1.20 to -0.73)
Greenland	1.08(0.74 - 1.43)	-1.27(-1.37 to -1.17)	-0.05(-0.13 - 0.02)
Grenada	-0.05(-0.55 - 0.45)	0.65(0.50 - 0.81)	0.87(0.15 - 1.58)
Guam	-0.69(-1.01 to -0.37)	0.64(0.39 - 0.90)	-0.64(-0.93 to -0.34)
Guatemala	1.38(0.82 - 1.94)	-0.49(-0.61 to -0.38)	1.52(0.91 - 2.15)
Guinea	0.92(0.83 - 1.01)	0.51(0.42 - 0.60)	1.00(0.85 - 1.15)
Guinea-Bissau	0.30(0.15 - 0.45)	-1.42(-1.51 to -1.32)	1.80(1.65 - 1.94)
Guyana	-0.31(-0.57 to -0.05)	0.28(0.20 - 0.36)	0.20(0.06 - 0.35)
Haiti	-0.60(-0.92 to -0.27)	-0.29(-0.43 to -0.14)	0.14(0.10 - 0.18)
Honduras	1.90(1.78 - 2.02)	1.51(1.33 - 1.68)	1.73(1.40 - 2.05)
Hungary	-0.36(-0.65 to -0.07)	-0.06(-0.24 - 0.13)	-0.69(-0.88 to -0.51)
Iceland	-0.25(-0.45 to -0.05)	-1.52(-1.64 to -1.40)	-1.07(-1.30 to -0.85)
India	1.26(1.18 - 1.34)	-0.22(-0.31 to -0.13)	-0.30(-0.38 to -0.22)
Indonesia	1.98(1.92 - 2.03)	0.31(0.25 - 0.36)	1.75(1.67 - 1.82)

Iran (Islamic Republic of)	0.92(0.76 - 1.07)	0.11(0.05 - 0.18)	0.53(0.34 - 0.73)
Iraq	1.39(1.17 - 1.62)	0.77(0.56 - 0.98)	0.59(0.45 - 0.74)
Ireland	0.48(0.23 - 0.74)	-0.81(-0.98 to -0.63)	-1.21(-1.45 to -0.97)
Israel	-0.40(-0.68 to -0.11)	-0.53(-0.73 to -0.33)	-1.54(-1.82 to -1.26)
Italy	-0.56(-0.60 to -0.52)	-1.57(-1.65 to -1.49)	-1.07(-1.25 to -0.89)
Jamaica	-0.96(-1.43 to -0.49)	-0.19(-0.49 - 0.11)	1.98(1.41 - 2.56)
Japan	-0.02(-0.15 - 0.11)	-0.64(-0.70 to -0.59)	-0.33(-0.44 to -0.23)
Jordan	2.06(1.88 - 2.24)	-0.51(-0.60 to -0.41)	0.23(0.04 - 0.42)
Kazakhstan	-0.20(-0.67 - 0.28)	-0.78(-1.26 to -0.29)	0.62(0.47 - 0.77)
Kenya	2.68(2.46 - 2.90)	1.39(1.19 - 1.59)	1.94(1.73 - 2.16)
Kiribati	0.12(-0.13 - 0.37)	-0.28(-0.32 to -0.24)	-0.62(-0.82 to -0.42)
Kuwait	-0.28(-0.81 - 0.25)	-0.41(-0.76 to -0.06)	0.79(0.50 - 1.09)
Kyrgyzstan	0.97(0.49 - 1.46)	-0.76(-1.10 to -0.42)	-1.36(-1.59 to -1.12)
Lao People's Democratic Republic	0.59(0.57 - 0.62)	-1.11(-1.26 to -0.95)	0.23(0.18 - 0.28)
Latvia	3.04(2.34 - 3.74)	0.33(0.08 - 0.59)	1.73(1.36 - 2.09)
Lebanon	2.53(2.27 - 2.78)	-0.43(-0.48 to -0.37)	0.93(0.79 - 1.06)
Lesotho	3.05(2.85 - 3.25)	1.51(1.32 - 1.71)	1.36(1.11 - 1.62)
Liberia	0.51(-0.16 - 1.17)	-1.99(-2.10 to -1.88)	1.67(1.50 - 1.84)
Libya	1.29(1.16 - 1.43)	0.14(0.03 - 0.26)	0.33(0.25 - 0.41)
Lithuania	3.01(2.28 - 3.75)	-0.81(-1.06 to -0.57)	1.92(1.38 - 2.47)
Luxembourg	-1.16(-1.25 to -1.08)	-1.27(-1.33 to -1.21)	-2.04(-2.14 to -1.94)
Madagascar	0.56(0.48 - 0.64)	-1.22(-1.38 to -1.05)	-0.36(-0.50 to -0.21)

Malawi	0.77(0.67 - 0.87)	-0.29(-0.40 to -0.18)	0.95(0.82 - 1.08)
Malaysia	1.51(1.41 - 1.60)	-0.55(-0.81 to -0.30)	0.08(-0.07 - 0.24)
Maldives	0.40(0.14 - 0.67)	-1.74(-1.88 to -1.59)	-0.06(-0.14 - 0.01)
Mali	1.33(1.20 - 1.46)	-0.24(-0.31 to -0.17)	0.66(0.62 - 0.71)
Malta	0.27(0.13 - 0.42)	-1.46(-1.54 to -1.39)	-1.24(-1.40 to -1.09)
Marshall Islands	0.63(0.49 - 0.78)	0.58(0.46 - 0.70)	-0.07(-0.31 - 0.16)
Mauritania	0.17(0.10 - 0.24)	-2.17(-2.27 to -2.07)	1.32(1.16 - 1.48)
Mauritius	1.70(1.45 - 1.95)	-1.78(-2.05 to -1.52)	0.18(-0.13 - 0.50)
Mexico	0.93(0.87 - 1.00)	-0.22(-0.3 to -0.14)	-0.11(-0.22 - 0.01)
Micronesia (Federated States of)	0.23(0.08 - 0.38)	0.56(0.52 - 0.61)	0.48(0.39 - 0.57)
Monaco	0.66(0.51 - 0.82)	0.51(0.46 - 0.56)	-0.24(-0.30 to -0.17)
Mongolia	3.01(2.71 - 3.30)	-3.22(-3.70 to -2.75)	-0.06(-0.20 - 0.08)
Montenegro	1.03(0.96 - 1.10)	0.34(0.25 - 0.43)	0.78(0.71 - 0.84)
Morocco	1.52(1.36 - 1.69)	0.49(0.28 - 0.71)	0.67(0.34 - 0.99)
Mozambique	2.32(2.16 - 2.49)	-0.02(-0.15 - 0.10)	1.26(1.19 - 1.32)
Myanmar	1.26(1.15 - 1.37)	-0.99(-1.04 to -0.93)	0.62(0.60 - 0.65)
Namibia	1.65(1.43 - 1.88)	0.12(-0.10 - 0.34)	2.00(1.86 - 2.13)
Nauru	-0.38(-0.57 to -0.19)	0.28(0.12 - 0.44)	0.53(0.38 - 0.69)
Nepal	2.08(1.81 - 2.34)	0.21(0.07 - 0.36)	0.84(0.69 - 1.00)
Netherlands	-0.07(-0.22 - 0.08)	-0.63(-0.78 to -0.49)	-0.85(-1.01 to -0.68)
New Zealand	-0.09(-0.23 - 0.06)	-1.72(-1.90 to -1.53)	-1.60(-1.76 to -1.43)
Nicaragua	1.50(1.30 - 1.70)	-0.14(-0.41 - 0.13)	0.65(0.47 - 0.83)

Niger	-0.52(-0.66 to -0.38)	-1.81(-1.96 to -1.65)	1.97(1.82 - 2.12)
Nigeria	0.62(0.50 - 0.75)	0.52(0.41 - 0.63)	1.09(0.97 - 1.21)
Niue	0.67(0.43 - 0.91)	0.26(0.20 - 0.32)	0.61(0.56 - 0.66)
North Macedonia	3.97(3.46 - 4.48)	0.48(0.29 - 0.68)	1.41(1.24 - 1.57)
Northern Mariana Islands	-0.31(-0.78 - 0.17)	3.37(2.73 - 4.02)	1.22(1.00 - 1.43)
Norway	0.01(-0.18 - 0.21)	-1.37(-1.44 to -1.30)	-0.89(-1.08 to -0.70)
Oman	2.44(2.06 - 2.82)	0.35(0.11 - 0.59)	0.40(0.28 - 0.52)
Pakistan	2.03(1.80 - 2.27)	0.50(0.36 - 0.64)	0.58(0.43 - 0.72)
Palau	0.67(0.46 - 0.88)	0.07(0.01 - 0.13)	-0.09(-0.16 to -0.02)
Palestine	1.00(0.81 - 1.20)	-0.38(-0.44 to -0.32)	-0.18(-0.29 to -0.07)
Panama	2.58(2.36 - 2.81)	-1.23(-1.40 to -1.07)	0.38(0.01 - 0.78)
Papua New Guinea	0.56(0.46 - 0.67)	0.90(0.84 - 0.96)	0.99(0.93 - 1.04)
Paraguay	0.13(-0.02 - 0.29)	0.61(0.49 - 0.73)	1.21(0.84 - 1.59)
Peru	-0.52(-0.81 to -0.23)	-0.83(-0.99 to -0.68)	0.19(0.06 - 0.33)
Philippines	0.57(0.39 - 0.75)	-0.75(-0.97 to -0.53)	-0.20(-0.39 to -0.01)
Poland	3.25(2.29 - 4.22)	0.25(0.10 - 0.40)	0.53(0.27 - 0.80)
Portugal	-0.44(-0.65 to -0.23)	-0.31(-0.37 to -0.25)	-1.38(-1.57 to -1.19)
Puerto Rico	-0.31(-0.52 to -0.10)	-0.31(-0.46 to -0.16)	-1.20(-1.32 to -1.08)
Qatar	0.22(-0.12 - 0.57)	1.32(1.06 - 1.58)	0.78(0.47 - 1.09)
Republic of Korea	1.22(0.64 - 1.82)	-1.62(-1.82 to -1.41)	0.12(-0.05 - 0.30)
Republic of Moldova	1.70(1.34 - 2.05)	-0.27(-0.55 - 0.01)	1.82(1.35 - 2.30)
Romania	1.61(1.52 - 1.69)	0.45(0.32 - 0.58)	1.00(0.89 - 1.11)

Russian Federation	-0.25(-0.52 - 0.02)	-0.89(-1.28 to -0.50)	1.52(1.38 - 1.66)
Rwanda	0.18(-0.05 - 0.40)	-1.96(-2.23 to -1.68)	-0.40(-0.65 to -0.15)
Saint Kitts and Nevis	-1.90(-2.45 to -1.34)	-0.40(-0.59 to -0.22)	0.38(0.23 - 0.54)
Saint Lucia	-1.24(-1.66 to -0.81)	-0.55(-0.80 to -0.30)	-0.49(-0.69 to -0.29)
Saint Vincent and the Grenadines	-1.02(-1.47 to -0.56)	0.45(0.23 - 0.67)	0.26(0.04 - 0.49)
Samoa	-0.37(-0.50 to -0.25)	0.01(-0.04 - 0.06)	-0.66(-0.85 to -0.47)
San Marino	0.64(0.56 - 0.72)	-0.09(-0.16 to -0.02)	-0.36(-0.40 to -0.32)
Sao Tome and Principe	0.13(-0.32 - 0.58)	1.06(0.98 - 1.13)	1.45(1.35 - 1.56)
Saudi Arabia	2.48(2.26 - 2.70)	-0.92(-1.21 to -0.62)	-0.86(-1.08 to -0.63)
Senegal	0.44(0.20 - 0.67)	-1.36(-1.48 to -1.24)	1.98(1.79 - 2.18)
Serbia	1.06(0.92 - 1.20)	0.47(0.38 - 0.55)	1.21(0.99 - 1.44)
Seychelles	0.64(0.18 - 1.10)	-0.07(-0.26 - 0.13)	0.97(0.65 - 1.29)
Sierra Leone	0.68(0.47 - 0.90)	-2.17(-2.34 to -2.00)	1.86(1.69 - 2.03)
Singapore	-0.13(-0.27 - 0.01)	-2.50(-2.72 to -2.29)	-0.56(-0.70 to -0.42)
Slovakia	1.46(1.11 - 1.82)	-0.20(-0.45 - 0.04)	0.63(0.49 - 0.77)
Slovenia	1.52(1.18 - 1.86)	-0.52(-0.72 to -0.32)	0.64(0.33 - 0.95)
Solomon Islands	0.56(0.31 - 0.80)	0.75(0.68 - 0.82)	0.56(0.50 - 0.61)
Somalia	0.67(0.58 - 0.77)	-0.42(-0.45 to -0.39)	-0.10(-0.15 to -0.04)
South Africa	0.30(0.13 - 0.46)	-0.38(-0.64 to -0.11)	0.63(0.39 - 0.87)
South Sudan	0.49(0.38 - 0.61)	-0.48(-0.56 to -0.41)	-0.12(-0.15 to -0.09)
Spain	0.46(0.40 - 0.51)	-0.94(-1.04 to -0.84)	-1.52(-1.67 to -1.37)
Sri Lanka	-2.13(-3.12 to -1.12)	1.24(0.99 - 1.48)	0.20(0.07 - 0.32)

Sudan	2.34(2.03 - 2.65)	-0.62(-0.76 to -0.47)	0.62(0.56 - 0.69)
Suriname	-0.43(-0.86 - 0.01)	0.58(0.36 - 0.79)	0.92(0.70 - 1.15)
Sweden	-1.47(-1.60 to -1.35)	-0.15(-0.24 to -0.06)	-1.10(-1.33 to -0.87)
Switzerland	0.25(-0.31 - 0.82)	-0.07(-0.39 - 0.25)	-1.98(-2.06 to -1.90)
Syrian Arab Republic	1.19(0.99 - 1.39)	0.11(0.02 - 0.20)	0.01(-0.16 - 0.16)
Taiwan (Province of China)	3.40(2.76 - 4.05)	-0.32(-0.49 to -0.16)	1.26(1.17 - 1.36)
Tajikistan	0.36(0.02 - 0.71)	0.66(0.49 - 0.83)	0.73(0.61 - 0.86)
Thailand	-0.30(-0.70 - 0.10)	-3.02(-3.40 to -2.64)	-0.77(-0.92 to -0.63)
Timor-Leste	1.70(1.42 - 1.98)	0.15(-0.11 - 0.42)	1.70(1.56 - 1.84)
Togo	0.48(0.39 - 0.58)	-2.07(-2.25 to -1.90)	1.89(1.75 - 2.04)
Tokelau	0.72(0.59 - 0.84)	0.20(0.17 - 0.23)	0.23(0.19 - 0.28)
Tonga	0.67(0.18 - 1.15)	0.71(0.56 - 0.85)	0.20(0.03 - 0.37)
Trinidad and Tobago	-2.32(-2.84 to -1.79)	-0.25(-0.59 - 0.09)	-0.61(-0.81 to -0.42)
Tunisia	1.29(1.26 - 1.32)	-0.34(-0.44 to -0.24)	0.34(0.30 - 0.38)
Turkey	0.20(0.14 - 0.25)	-0.34(-0.54 to -0.14)	-0.24(-0.64 - 0.16)
Turkmenistan	3.60(3.15 - 4.05)	1.89(1.64 - 2.13)	0.17(0.06 - 0.29)
Tuvalu	0.06(-0.07 - 0.18)	0.10(0.07 - 0.13)	-0.12(-0.21 to -0.03)
Uganda	2.97(2.71 - 3.23)	0.01(-0.12 - 0.13)	0.96(0.79 - 1.13)
Ukraine	0.92(0.68 - 1.15)	0.27(0.02 - 0.52)	0.07(-0.14 - 0.28)
United Arab Emirates	1.52(1.28 - 1.77)	-1.06(-1.45 to -0.67)	-0.33(-0.63 to -0.02)
United Kingdom	-0.04(-0.12 - 0.04)	-1.51(-1.68 to -1.35)	-0.82(-0.90 to -0.73)
United Republic of Tanzania	1.81(1.67 - 1.95)	-0.48(-0.55 to -0.41)	0.08(0.04 - 0.11)

United States of America	-0.65(-0.73 to -0.57)	-0.14(-0.18 to -0.09)	-1.70(-1.86 to -1.55)
United States Virgin Islands	0.93(0.71 - 1.15)	1.60(1.22 - 1.98)	1.42(1.15 - 1.69)
Uruguay	-0.31(-0.49 to -0.13)	-0.99(-1.11 to -0.88)	-0.12(-0.45 - 0.20)
Uzbekistan	2.60(2.43 - 2.77)	1.40(1.08 - 1.71)	1.40(1.12 - 1.67)
Vanuatu	0.68(0.56 - 0.80)	1.11(0.98 - 1.24)	0.59(0.54 - 0.64)
Venezuela (Bolivarian Republic of)	0.04(-0.34 - 0.41)	-0.02(-0.18 - 0.13)	0.79(0.37 - 1.20)
Viet Nam	2.11(1.99 - 2.24)	0.72(0.66 - 0.78)	0.78(0.75 - 0.81)
Yemen	1.47(1.34 - 1.60)	-0.03(-0.11 - 0.04)	0.85(0.75 - 0.94)
Zambia	1.15(1.11 - 1.19)	-0.50(-0.57 to -0.43)	0.18(0.06 - 0.31)
Zimbabwe	1.19(0.82 - 1.57)	0.63(0.41 - 0.86)	0.88(0.50 - 1.25)

ASDR age-standardized DALYs rate; *EAPC* estimated annual percentage change; *CI* confidence interval

Table S9 Percentage of genitourinary cancers deaths and DALYs attributable to risk factors in 1990 and 2019

Cancer	1990			2019		
	Leading risk	Percentage of death (95% UI)	Percentage of DALYs (95% UI)	Leading risk	Percentage of death (95% UI)	Percentage of DALYs (95% UI)
Kidney cancer	Smoking	20.78(15.00 - 26.43)	18.19(13.10 - 23.03)	High BMI	19.05(11.09 - 28.30)	18.55(10.92 - 27.37)
	High BMI	15.53(8.52 - 23.90)	13.98(7.72 - 21.74)	Smoking	18.09(12.81 - 23.44)	16.95(11.78 - 21.79)
	Occupational exposure to trichloroethylene	0.03(0.01 - 0.06)	0.04(0.01 - 0.07)	Occupational exposure to trichloroethylene	0.05(0.01 - 0.09)	0.06(0.01 - 0.11)
Bladder cancer	Smoking	41.05(32.07 - 49.14)	42.86(34.04 - 50.23)	Smoking	33.89(25.88 - 41.80)	36.76(44.00 - 28.46)
	High FPG	7.03(1.42 - 15.37)	6.24(1.23 - 13.77)	High FPG	9.98(2.09 - 21.30)	9.11(19.59 - 1.87)
Prostate cancer	Smoking	8.29(3.73 - 12.59)	8.82(3.99 - 13.38)	Smoking	6.01(2.71 - 9.29)	6.60(3.02 - 10.10)

BMI body - mass index; *DALYs* disability - adjusted life - years; *FPG* fasting plasma glucose *UI* uncertainty interval