



Technical Document

An Example of Reusing HealthWebMapper: Southern California Cancer Geospatial Modelling Viewer

Project conducted by:

San Diego State University

5500 Campanile Drive
San Diego, CA 92182-4493

Report prepared by:

Haihong Huang

Department of Geography, San Diego State University

June 28, 2018

Abstract

This report introduces how to reuse the source code of “HealthWebMapper” a web-based health data mapping tool developed by Dr. Su to visualize cancer GWR modelling results. The procedure mentioned in this report is similar to the tutorial in Dr. Su’s technical report (Web-based Health Data Mapping Tools for San Diego County) about how to reuse the source code for new dataset (p.12-18) but contains differences in details. Thus, this report serves as a unique reuse case for visualizing cancer GWR modelling results.

Part 1 Raw data Description

1. Sounthern_CA_WGS84 shapefiles(including dbf,prj,sbn,sbx,shp,shp.xml,shx)(Fig. 1)

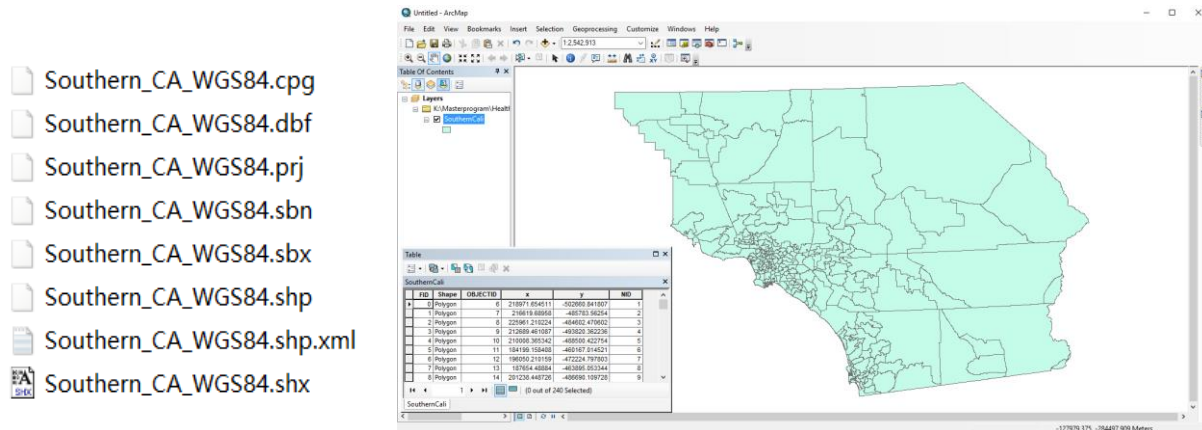


Fig. 1 SounthernCalifornia shapefiles and open it in ArcMap

If your original shpfiles projection is not WGS 1984, you need to transform your data following ArcMap→ArcToolBox→Data→Management Tools→Projections and Transformations→Project (see Fig. 4)

2. Raw data for the left map: Brst_ISMR_GWR_cancer_results.csv and Crcm_ISMR_GWR_results.csv (Fig.2)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	OBJECTID	MSSA_ID	Observed	Conc	LocalR2	Predicted	Intercept	C1_BR	C2_HR	C3_AFFL	C4_SINs	C5_SpO	Residual	StdError	StdErr_Int	StdErrC1	StdErrC2	StdErrC3	StdErrC4	StdErrC5	StdResid	tValC1	tValC2
2	6	115.1	0.643545	12.35146	0.131369	0.840833	0.963505	-2.09292	-0.08831	-0.06235	0.045653	-0.07666	-0.19729	0.182346	0.245974	4.065676	0.475805	0.068987	0.100239	0.088172	-1.08195	-0.51478	-0.1856
3	7	115.2a	0.819988	14.75317	0.176117	0.817084	0.979131	-3.28764	0.025574	-0.08073	0.076718	-0.09276	0.002905	0.211737	0.246216	3.52892	0.509573	0.069762	0.114767	0.086829	0.013718	-0.93163	0.050187
4	8	115.2b	0.99517	13.2473	0.154422	0.830272	0.99663	-2.59478	-0.05538	-0.07673	0.041678	-0.09749	0.164898	0.188789	0.22782	2.421524	0.476883	0.063584	0.095484	0.077599	0.873451	-0.17055	-0.11612
5	9	115.2c	0.695791	13.5029	0.16247	0.750885	0.932172	-1.43077	0.008304	-0.07416	0.086173	-0.06956	-0.05509	0.187647	0.238034	3.218786	0.477154	0.071255	0.107224	0.079789	-0.29361	-0.44451	0.017403
6	10	115.2d	1.055926	15.54385	0.188064	0.912768	0.885723	-0.88428	0.109722	-0.08106	0.127353	-0.05798	0.143158	0.191393	0.243951	2.366702	0.519624	0.069927	0.128204	0.074197	0.747983	-0.37363	0.211156
7	11	116a	0.632243	16.43286	0.3288	0.845954	0.67822	1.617606	0.131192	0.030362	0.096877	0.046275	-0.21371	0.217863	0.243059	0.886752	0.361073	0.072835	0.126243	0.090495	-0.98094	1.824193	0.363339
8	12	116b	0.53453	16.83481	0.233897	0.565459	0.909288	1.105666	-0.01029	-0.06567	0.07511	-0.07503	-0.03093	0.120656	0.278083	1.235575	0.464633	0.069267	0.146179	0.111356	-0.25634	0.89486	-0.02214
9	13	116c	0.884676	16.40485	0.282069	0.796114	0.772185	1.57858	0.061589	0.007299	0.069113	-0.00927	0.088562	0.216007	0.270003	1.039183	0.392966	0.077563	0.130147	0.105515	0.409996	1.519059	0.15673
10	14	116d	0.784396	18.11728	0.243616	0.717775	0.856747	0.487475	0.157373	-0.07779	0.133097	-0.06901	0.066621	0.166504	0.300963	1.468865	0.600539	0.06823	0.183464	0.107295	0.400117	0.331872	0.262053
11	15	116e	0.818367	15.93673	0.359102	0.897997	0.678545	1.578915	0.172854	0.040321	0.086497	0.026081	-0.07963	0.207704	0.238071	0.761873	0.373151	0.063585	0.123292	0.083461	-0.38338	2.072412	0.463229
12	16	116f	0.829719	16.57971	0.250998	0.772213	0.778681	1.509851	-0.00371	-0.03809	0.132128	0.042224	0.057506	0.194578	0.268968	1.271063	0.388344	0.085142	0.143818	0.115209	0.295542	1.187865	-0.00955
13	17	116g	0.578078	17.31772	0.245621	0.737966	0.920054	1.024858	0.006956	-0.07056	0.076372	-0.08735	-0.15989	0.186558	0.287834	1.302348	0.50794	0.068551	0.158565	0.113775	-0.85704	0.786931	0.013695
14	18	116h	1.148413	17.5096	0.229469	0.824	0.918909	0.735021	0.008273	-0.08509	0.103679	-0.06915	0.324414	0.215852	0.283099	1.446593	0.505695	0.070162	0.154725	0.108957	1.502942	0.508105	0.016361
15	19	116i	0.700043	16.23548	0.238034	0.746118	0.846565	1.212662	0.021277	-0.03087	0.068075	-0.0479	-0.04607	0.202282	0.262384	1.011805	0.417919	0.06488	0.134658	0.10051	-0.22777	1.198514	0.050913
16	20	116j	0.921065	16.73001	0.253284	0.859088	0.84177	1.16016	0.05028	-0.02459	0.06426	-0.05696	0.061977	0.204775	0.273511	1.002785	0.471825	0.060952	0.150113	0.100098	0.302657	1.156938	0.106565
17	21	116k	0.933522	17.43585	0.302905	0.772983	0.762405	1.556772	-0.01601	-0.05443	0.175107	0.079232	0.16054	0.214865	0.252044	1.418991	0.363794	0.089677	0.158928	0.11413	0.747164	1.097097	-0.04401
18	22	116l	0.824095	16.40362	0.234853	0.760383	0.818152	1.436252	0.000662	-0.03089	0.086887	-0.01201	0.063712	0.210964	0.271773	1.127807	0.3946	0.078696	0.129135	0.107985	0.302003	1.273491	0.001677
19	23	116m	0.738618	18.52799	0.287689	0.738398	0.929418	0.548982	-0.09806	-0.13641	0.212146	0.028135	0.00022	0.17078	0.296727	2.508006	0.442574	0.08378	0.147443	0.107477	0.001286	0.218892	-0.22156
20	24	116n	0.783283	18.90268	0.258173	0.761621	0.928042	-1.24534	0.060758	-0.12758	0.194398	-0.0203	0.021662	0.188313	0.277209	2.683035	0.499246	0.066238	0.149589	0.099217	0.11503	-0.46415	0.1217
21	25	116o	0.811905	18.79241	0.247067	0.804921	0.889418	-0.15874	0.130385	-0.09572	0.150104	-0.06197	0.006984	0.197008	0.299344	1.995078	0.604949	0.070486	0.181188	0.104875	0.035452	-0.07957	0.215531
22	26	116p	0.851689	17.38237	0.243843	0.796457	0.891151	0.928531	0.041864	-0.05661	0.075979	-0.08135	0.055232	0.180237	0.28854	1.1748	0.529762	0.063865	0.165356	0.107404	0.306443	0.790374	0.079024
23	27	116q	0.950408	16.5544	0.20427	0.812683	0.872947	1.256801	-0.03801	-0.07208	0.108134	-0.02323	0.137797	0.211596	0.274097	1.376451	0.418088	0.078176	0.13166	0.107952	0.651226	0.913073	-0.09091
24	28	116r	0.948507	16.22617	0.245121	0.760269	0.829239	1.343584	0.023984	-0.02313	0.068302	-0.03715	0.188238	0.214237	0.265303	1.029819	0.404169	0.069064	0.130595	0.102731	0.878641	1.30468	0.05934
25	29	116s	0.684242	16.22342	0.287696	0.765037	0.779775	1.359121	0.093962	0.003886	0.068212	-0.02789	-0.08079	0.186825	0.260066	0.906037	0.423676	0.061416	0.136052	0.093957	-0.43246	1.500073	0.221777
26	30	116t	0.79974	17.19171	0.254762	0.842998	0.83092	1.098125	0.060509	-0.02046	0.066367	-0.05284	-0.04326	0.193353	0.283093	0.962731	0.514485	0.058577	0.160438	0.097315	-0.22373	1.140635	0.11761
27	31	116u	0.843056	16.40206	0.356431	0.870311	0.710678	1.468004	0.164733	0.032077	0.077529	-0.00019	-0.02726	0.194544	0.256516	0.781203	0.427912	0.059913	0.136701	0.088635	-0.1401	1.879158	0.38497
28	32	116v	0.547243	18.07529	0.228565	0.796805	0.956623	-2.36753	0.08067	-0.10354	0.135133	-0.07203	-0.24956	0.208226	0.27005	3.015101	0.574082	0.066942	0.149642	0.086509	-1.19852	-0.78523	0.14052
29	33	128	0.90799	15.66248	0.47027	0.889166	0.768946	1.507015	-0.12306	-0.16226	0.159136	-0.18621	0.018824	0.124787	0.182549	1.842531	0.250235	0.059464	0.049551	0.239627	0.150849	0.817905	-0.49178
30	34	129.1	0.763374	16.20083	0.298812	0.934713	0.885122	0.283896	-0.24244	-0.14621	0.135893	-0.21495	-0.17134	0.182325	0.240328	1.574596	0.371799	0.057923	0.043964	0.257386	-0.93974	0.180298	-0.65176
31	35	129.2	0.745056	15.84267	0.525798	0.880541	0.813967	0.908463	-0.27097	-0.17111	0.171286	-0.33063	-0.13549	0.185578	0.233408	1.498424	0.333969	0.057327	0.042813	0.249707	-0.73007	0.606279	-0.81136

Fig.2 GWR_cancer_ism.csv showed in EXCEL, containing MSSA_ID, cotaining Breast Cancer data and highlight desired columns

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
OBJECTID	MSSA_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_BR	C2_H	C3_AFFL	C4_SInS	C5_SPoD	Residual	StdError	StdErr_Int	StdErrC1	StdErrC2	StdErrC3	StdErrC4	StdErrC5	StdResid	tValC1	tValC2
6	115.1	0.76957	12.35146	0.361578	1.036797	1.026964	-0.17453	0.679736	-0.07707	-0.01159	-0.14786	-0.26723	0.357047	0.481636	7.960903	0.931663	0.135081	0.196276	0.172648	-0.74843	-0.08975	0.729594
7	115.2a	0.991213	14.75317	0.364581	0.918048	1.392961	-2.07506	-0.09902	-0.08745	-0.18363	-0.18367	0.073164	0.414597	0.48211	6.909892	0.997782	0.136599	0.224722	0.170018	0.176471	-0.3003	-0.09924
8	115.2b	1.177687	13.2473	0.397598	0.948955	1.06912	-1.94375	0.477268	-0.05238	-0.09307	-0.18447	0.228732	0.369662	0.446088	4.741529	0.933773	0.124502	0.186965	0.151945	0.618759	-0.40994	0.511119
9	115.2c	0.59813	13.5029	0.346007	0.830537	1.247541	-0.45922	0.188214	-0.09706	-0.09625	-0.15308	-0.23241	0.367427	0.466089	6.302627	0.934305	0.139523	0.209954	0.156233	-0.63252	-0.07286	0.201448
10	115.2d	0.908813	15.54385	0.351068	1.086877	1.480535	0.820935	-0.42003	-0.09079	-0.25152	-0.17204	-0.17806	0.374761	0.477674	4.634182	0.107464	0.136923	0.251033	0.145284	-0.47514	0.177148	-0.41282
11	116a	1.615536	16.43286	0.069618	1.350539	1.466408	1.480173	-0.09694	-0.01118	-0.18613	-0.1795	0.264998	0.426592	0.475929	1.736327	0.707008	0.142616	0.247193	0.177196	0.621196	0.852474	-0.13711
12	116b	1.169095	16.83481	0.363486	1.199283	2.015611	2.61101	-1.1554	-0.13145	-0.52249	-0.38429	-0.03019	0.236253	0.544508	2.419349	0.909786	0.135629	0.286229	0.218043	-0.12778	1.07922	-1.26997
13	116c	1.357452	16.40485	0.139715	1.298542	1.741024	1.762623	-0.53569	-0.07417	-0.32925	-0.29654	0.05891	0.422959	0.528686	2.034798	0.769458	0.151875	0.254838	0.206606	0.139281	0.86624	-0.69619
14	116d	0.824714	18.11728	0.418348	0.832619	1.923455	2.971886	-1.21444	-0.09969	-0.55429	-0.34035	-0.00791	0.326027	0.589309	2.876149	1.175902	0.1336	0.359236	0.210093	-0.02425	1.033287	-1.03277
15	116e	1.527404	15.93673	0.187096	1.195665	1.607605	1.575576	-0.21062	-0.00753	-0.31312	-0.28586	0.33174	0.406701	0.466161	1.491805	0.730658	0.124504	0.241414	0.163423	0.815684	0.105615	-0.28826
16	116f	1.349935	17.31772	0.099474	1.316157	1.674921	1.405703	-0.50669	-0.15784	-0.10984	-0.16003	0.033778	0.380998	0.526659	2.488837	0.760406	0.166715	0.281607	0.225588	0.088656	0.564803	-0.66635
17	116g	1.266494	17.31772	0.409506	1.35569	2.073785	2.889713	-1.31751	-0.12568	-0.5823	-0.4002	-0.0892	0.365294	0.5636	2.550097	0.994584	0.134229	0.310482	0.222781	-0.24418	1.133178	-1.32468
18	116h	1.305977	17.5096	0.391564	1.253252	2.019484	2.867826	-1.31092	-0.12803	-0.53621	-0.34494	0.052725	0.426555	0.554329	2.832538	0.990189	0.137382	0.302964	0.213345	0.124746	1.012458	-1.32391
19	116i	1.785398	16.23508	0.29922	1.330596	1.917703	1.981558	-0.87225	-0.11062	-0.46298	-0.37725	0.396083	0.513768	1.98119	0.818317	0.12704	0.26367	0.196806	1.14825	1.000186	-1.06591	
20	116j	0.888545	17.30041	0.381891	0.958324	2.014295	2.243256	-1.08288	-0.09979	-0.55918	-0.41677	-0.06978	0.400965	0.535555	1.963529	0.923869	0.119348	0.293933	0.195999	-0.17403	1.142461	-1.17212
21	116k	1.137097	17.43585	0.080798	1.276273	1.625568	1.304387	-0.38251	-0.1785	0.00411	-0.12893	-0.13918	0.420722	0.493522	2.778493	0.712336	0.175593	0.311193	0.223476	-0.3308	0.469459	-0.53697
22	116l	0.865114	16.40362	0.161024	1.335814	1.789248	1.685276	-0.65453	-0.13117	-0.2955	-0.28058	-0.4707	0.413083	0.532152	2.208331	0.772658	0.154093	0.252855	0.211444	-1.13948	0.763144	-0.84712
23	116m	1.156147	18.52799	0.291987	0.923092	1.992789	-0.23498	-0.97153	-0.26929	-0.09972	-0.19584	0.233055	0.334401	0.581013	4.910866	0.866594	0.164048	0.288704	0.210448	0.696932	-0.04785	-1.12109
24	116n	0.769007	18.90268	0.290802	1.003607	1.860148	-0.48185	-1.09722	-0.12581	-0.35071	-0.19034	-0.2346	0.36873	0.542796	5.253587	0.977562	0.129699	0.292908	0.194274	-0.36624	-0.09172	-1.1224
25	116o	0.457851	18.79241	0.396217	0.885946	1.948619	2.61787	-1.37061	-0.10017	-0.54421	-0.28888	-0.42809	0.385757	0.586139	3.906514	1.184537	0.138018	0.35478	0.205354	-1.03975	0.670129	-1.15709
26	116p	1.519527	17.38237	0.435491	1.488908	2.062215	2.686217	-1.29481	-0.11141	-0.6064	-0.41249	0.030619	0.352918	0.564983	2.300347	1.037313	0.125053	0.32378	0.210305	0.086761	1.167744	-1.24823
27	116q	1.131216	16.5544	0.253632	1.235831	1.879311	2.265801	-0.89829	-0.16646	-0.33071	-0.28387	-0.10461	0.414321	0.536703	2.695196	0.818648	0.153074	0.257516	0.211379	-0.2525	0.840681	-1.09729
28	116r	1.493789	16.22617	0.240529	1.325063	1.875155	1.85806	-0.77252	-0.11154	-0.41146	-0.35476	0.168726	0.419493	0.519483	2.016465	0.791394	0.135232	0.257516	0.201155	0.402215	0.921445	-0.97614
29	116s	1.276381	16.22342	0.302946	1.323417	1.898833	1.898279	-0.79121	-0.07943	-0.47366	-0.38725	-0.04704	0.365817	0.50923	1.774089	0.82959	0.25152	0.2664	0.183975	-1.2858	1.070002	-0.95373
30	116t	0.776807	17.19171	0.43247	0.7918	2.058751	2.289487	-1.19991	-0.09359	-0.60579	-0.42865	-0.01499	0.378599	0.554317	1.8851	1.007401	0.114698	0.314149	0.19055	-0.0396	1.214518	-1.19109
31	116u	0.877349	16.40206	0.328229	1.188658	1.836102	1.746507	-0.60941	-0.04091	-0.45772	-0.38092	-0.31131	0.380931	0.502278	1.529655	0.837884	0.117314	0.267671	0.173553	-0.81723	1.141765	-0.72732
32	116v	1.247408	18.07529	0.358284	0.955394	1.801525	-0.79867	-1.0923	-0.08831	-0.42671	-0.20802	0.292014	0.407723	0.528779	5.903796	1.124096	0.131078	0.293011	0.169391	0.716207	-0.13528	-0.97171
33	128	0.807472	15.66248	0.065199	1.311572	1.132326	1.430385	-0.22028	0.036889	-0.03897	-0.59632	-0.5041	0.244342	0.357445	3.607815	0.489979	0.116435	0.097025	0.469209	-0.26039	0.396469	-0.44956
34	129.1	1.274335	16.20083	0.086452	1.431909	1.804517	-0.80521	-1.02977	-0.07491	-0.0339	0.027789	-0.15757	0.357007	0.47058	3.083179	0.728363	0.113418	0.086084	0.503981	-0.44137	-0.26116	-1.41381
35	129.2	1.707426	15.84267	0.080309	1.258117	1.315422	2.814507	-0.71161	-0.07806	0.070024	-0.49624	0.449309	0.363375	0.457031	2.934028	0.653936	0.112251	0.083831	0.488945	1.23649	0.959264	-1.0882

Fig.3 Crcm_ISMR_GWR_results.csv showed in EXCEL, containing Colorectal Male data and highlight desired columns

Since I only need to column MSSA_ID and Observed in both csv files,remove other collomns and add column “CANCER_TYPE”. Then, organize desired data into one file called “GWR_cancer_ism.csv” with 3 columns and the following 3 headers :

- 1) “MSSA_ID”: unique ID for each polygon
- 2) “CANCER_TYPE”: in this case value is either “Breast Cancer” or “Colorectal Male”
- 3) “Indirect standardized mortality”: columns named “Observed” in both files

3. Raw data for the right map: socioeconomic.csv

V1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	MSSA_ID	Breast Cancer	Breast Cancer_Local R sq	Breast Cancer	Breast Cancer	Breast Cancer	Breast Cancer	Breast Cancer	Breast Cancer	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male	Colorectal Male
2	115.1	Breast Cancer	0.131369031	-0.19729	-0.09922	-0.08831	-0.06235	0.045653	-0.07666	Colorectal Male	0.361578	-0.26723	-0.17453	0.679736	-0.07707	-0.14786	0.004367	0.232	1.727544	
3	115.2a	Breast Cancer	0.176116634	0.002905	-3.28764	0.025574	-0.08073	0.076718	-0.09276	Colorectal Male	0.364581	0.073164	-0.27506	-0.09902	-0.08745	-0.18363	-0.13673	0.204708	2.119877	
4	115.2b	Breast Cancer	0.154422459	0.164898	-2.59478	-0.05538	-0.07673	0.041678	-0.09749	Colorectal Male	0.397598	0.228732	-1.94375	0.477268	-0.05238	-0.09307	-0.18447	0.132773	1.42022	3.140712
5	115.2c	Breast Cancer	0.162466971	-0.05509	-1.43077	0.088304	-0.07416	0.086173	-0.06956	Colorectal Male	0.346007	-0.23241	-0.45922	0.188214	-0.09706	-0.09625	-0.15308	0.023327	1.33331	3.090696
6	115.2d	Breast Cancer	0.188063611	0.143158	-0.88428	0.109722	-0.08106	0.127353	-0.05798	Colorectal Male	0.351068	-0.17806	0.820935	-0.42003	-0.09079	-0.25152	-0.17204	0.011783	2.00289	1.185923
7	116a	Breast Cancer	0.328799664	-0.21371	1.617606	0.131192	0.030362	0.096877	0.046275	Colorectal Male	0.069618	0.264998	1.480173	-0.09694	-0.01118	-0.18613	-0.1795	0.047573	0.411522	0.131738
8	116b	Breast Cancer	0.233897283	-0.03093	1.105666	-0.01029	-0.07503	0.07511	-0.07503	Colorectal Male	0.363486	-0.03019	0.236253	-0.544508	-0.11145	-0.13457	-0.38429	0.008154	0.90285	-1.177687
9	116c	Breast Cancer	0.282068532	0.088562	1.57858	0.061589	0.007299	0.069113	-0.00927	Colorectal Male	0.139715	0.05891	1.762623	-0.526659	0.07417	-0.32925	-0.29654	0.011634	0.46137	-0.26984
10	116d	Breast Cancer	0.243615544	0.066621	0.487475	0.157373	-0.0779	0.133097	-0.06901	Colorectal Male	0.418348	-0.00791	2.971886	-1.21444	-0.09969	-0.55429	-0.34035	0.006529	0.08543	4.115436
11	116e	Breast Cancer	0.359101854	-0.07963	1.578915	0.172854	0.040321	0.086497	0.026081	Colorectal Male	0.187096	0.33174	1.575576	-0.21062	-0.00753	-0.31312	-0.28586	0.023962	0.191744	1.671616
12	116f	Breast Cancer	0.250997974	0.057506	1.509851	-0.00371	-0.03809	0.132128	0.042224	Colorectal Male	0.099474	0.033778	1.405703	-0.50669	-0.15784	-0.10984	-0.16003	0.022314	0.377434	0.879736
13	116g	Breast Cancer	0.245621307	-	0.224858	-0.06956	-0.7056	0.03772	-0.08732	Colorectal Male	0.405506	-0.0892	0.889713	1.31571	-0.25268	-0.5823	-0.4047	0.013026	0.817051	-0.57365
14	116h	Breast Cancer	0.229403205	0.324414	-0.00073	0.08509	0.130679	-0.06918	0.03679	Colorectal Male	0.15454	0.052725	2.86515	-1.13092	0.3803	0.3621	0.40014	0.01147	0.43771	0.001929
15	116i	Breast Cancer	0.23033967	-0.04607	1.212662	0.02177	-0.08007	0.068075	-0.0479	Colorectal Male	0.29922	0.45480	1.81558	-0.87225	-0.1062	-0.06298	-0.37725	0.00686	0.64816	0.65729
16	116j	Breast Cancer	0.253284456	0.061977	1.161016	0.05028	-0.24549	0.05426	-0.05696	Colorectal Male	0.381891	-0.09678	2.243256	-1.08288	-0.09979	-0.55918	-0.1477	0.011438	0.183576	1.259955
17	116k	Breast Cancer	0.302904533	0.16094	1.556772	-0.01601	-0.05443	0.174017	0.07923	Colorectal Male	0.080798	-0.13918	3.0438	-0.38251	-0.1785	-0.0041	-0.12893	0.014929	0.4313	0.778076
18	116l	Breast Cancer	0.234852768	0.003712	1.436252	0.006662	-0.03681	0.086807	-0.02101	Colorectal Male	0.161024	-0.4707	1.685276	-0.65453	-0.3117	-0.2955	-0.2058	0.019591	0.691282	0.72457
19	116m	Breast Cancer	0.287689408	0.00212	0.548982	-0.09806	-0.13641	0.212466	0.02813	Colorectal Male	0.291987	0.233055	-0.23498	-0.97513	-0.26299	-0.9927	-0.19584	0.012647	0.22197	2.864408
20	116n	Breast Cancer	0.258173109	0.021662	1.24534	0.060758	-0.12758	0.194308	-0.0203	Colorectal Male	0.298082	-0.2346	0.481875	-1.09722	-0.12581	-0.35071	-0.10304	0.009425	0.24796	2.702882
21	116o	Breast Cancer	0.247066983	0.006984	-0.15874	0.133085	-0.09572	0.150104	-0.06197	Colorectal Male	0.396217	-0.42809	2.61878	-1.37061	-0.0017	-0.54421	-0.28888	0.02169	0.14962	0.306477
22	116p	Breast Cancer	0.243843373	0.055232	0.928531	0.041864	-0.56661	0.075979	-0.03813	Colorectal Male	0.435491	0.030619	2.126827	-1.29481	-0.1141	-0.6064	-0.4219	0.015056	0.35848	1.188188
23	116q	Breast Cancer	0.204270159	0.13779	1.256801	-0.03801	-0.27628	0.108134	-0.02323	Colorectal Male	0.253632	-0.10461	2.658801	-0.98929	-0.16646	-0.3307	-0.12887	0.017547	0.552636	0.348474
24	116r	Breast Cancer	0.245211183	0.188238	1.345984	0.023984	-0.03321	0.068302	-0.03715	Colorectal Male	0.240259	0.168726	2.88806	-0.77252	-0.11154	-0.44146	-0.35476	0.011087	0.470287	-0.1942
25	116s	Breast Cancer	0.207695599	-0.03879	1.59121	-0.29682	-0.03886	0.062121	-0.07289	Colorectal Male	0.302496	-0.04784	1.89279	-0.79161	-0.09704	-0.47466	-0.34672	0.007395	0.29119	-0.333
26	116t	Breast Cancer	0.25474322	0.033216	1.09315	0.065059	-0.02046	0.066387	-0.03584	Colorectal Male	0.43247	-0.04199	1.58948	-1.19991	-0.09359	-0.6057	-0.867	0.007649	0.49719	1.759492
27	116u	Breast Cancer	0.235645092	-0.27266	1.468004	0.164733	0.03077	0.07529	-0.00919	Colorectal Male	0.328229	-0.1311	1.746507	-0.60941	-0.40971	-0.45293	-0.30893	0.004392	0.139675	1.472089
28	116v	Breast Cancer	0.22865453	-0.24956	2.36753	0.08067	-0.10354	0.135133	-0.07203	Colorectal Male	0.285438	0.29014	-0.79867	-1.0293	-0.08331	-0.42671	-0.20801	0.018125	0.03675	0.009575
29	128	Breast Cancer	0.470270178	0.018824	1.578015	-0.12306	-0.16226	0.159136	-0.18621	Colorectal Male	0.065199	-0.5401	1.430385	-0.20208	0.036889	-0.03897	-0.55663	0.008393	0.853275	-1.87679
30	129.1	Breast Cancer	0.298811694	0.17314	0.28096	-0.24244	-0.14621	0.135893	-0.21495	Colorectal Male	0.086452	-0.15757	-0.80251	-1.02977	-0.07491	-0.03397	-0.27018	0.01258	0.28779	0.471128
31	129.2	Breast Cancer	0.525798408	-0.03459	0.904863	-0.70797	-0.17111	0.171286	-0.33063	Colorectal Male	0.080309	0.449309	2.814507	-0.7111	-0.07806	0.070024	-0.43624	0.028685	0.57145	-0.32266

"Breast Cancer_% of Black population",
 "Breast Cancer_% of Hispanic population",
 "Breast Cancer_Affluence score",
 "Breast Cancer_Standardized % of health-insured population",
 "Breast Cancer_Standardized population density",
 "Colorectal Male",
 "Colorectal Male_Local R square",
 "Colorectal Male_Residual",
 "Colorectal Male_% of Black population",
 "Colorectal Male_% of Hispanic population",
 "Colorectal Male_Affluence score",
 "Colorectal Male_Standardized % of health-insured population",
 "Colorectal Male_Standardized population density",
 "% of Black population",
 "% of Hispanic population",
 "Affluence score",
 "Standardized % of health-insured population",
 "Standardized population density"

Tips: Before you start customizing HealthWebMapper source code for your own dataset, you may have a huge csv file containing all the data. However, you need to first decide which data you want to show in the left or right map, what does the drop-down menu look like. Then, according to your design and original menu structure, separate the data into two different csv files for each map and organized it. Every csv files should have a header for each column.

Part 2 Conversion of raw data to js. files

In Dr. Su's technical report, the method she adopted to reuse the tool is to "force overwrite of existing identically named objects". Thus, you need to first convert raw data to the formats that match the original data. Conversion procedure showed in Table 1.

Raw data to js files	Original data in HealthWebMapper to be replaced	method
Southern_CA_WGS84.shp to Southern_CA_WGS84.js	Polygon.js or MSSA_SD_Imperial.js	shp to js 1) ArcMap→ArcToolBox→Data Management Tools→Projections and Transformations→Project(see Fig. 4) 2) Convert .shp with WGS 1984 projection to geojson through Mapshaper(http://mapshaper.org/) 3) Edit geojs file by adding "var stateData=" and save as .jsfile

GWR_cancer_ism.csv to GWR_cancer_ism.js	Cancer.js or late_stage_dx_SD_Imperial_fak e.js	csv to js 1) Convert .cvs to geojson via http://www.convertcsv.com/ csv-to-geojson.htm 2) Edit geojson file by adding “var CANCER_SD_Imperial=”a nd save as .js file
socioeconomic.csv to socioeconomic.js	CENSUS2010_v2.js or MSSA_ACS_SD_Imperial_sim ple.js	csv to js 1) Convert .cvs to geojson via http://www.convertcsv.com/ csv-to-geojson.htm 2) Edit geojson file by adding “var census=”and save as .js file

Table 1 conversion of raw data to desired js. format

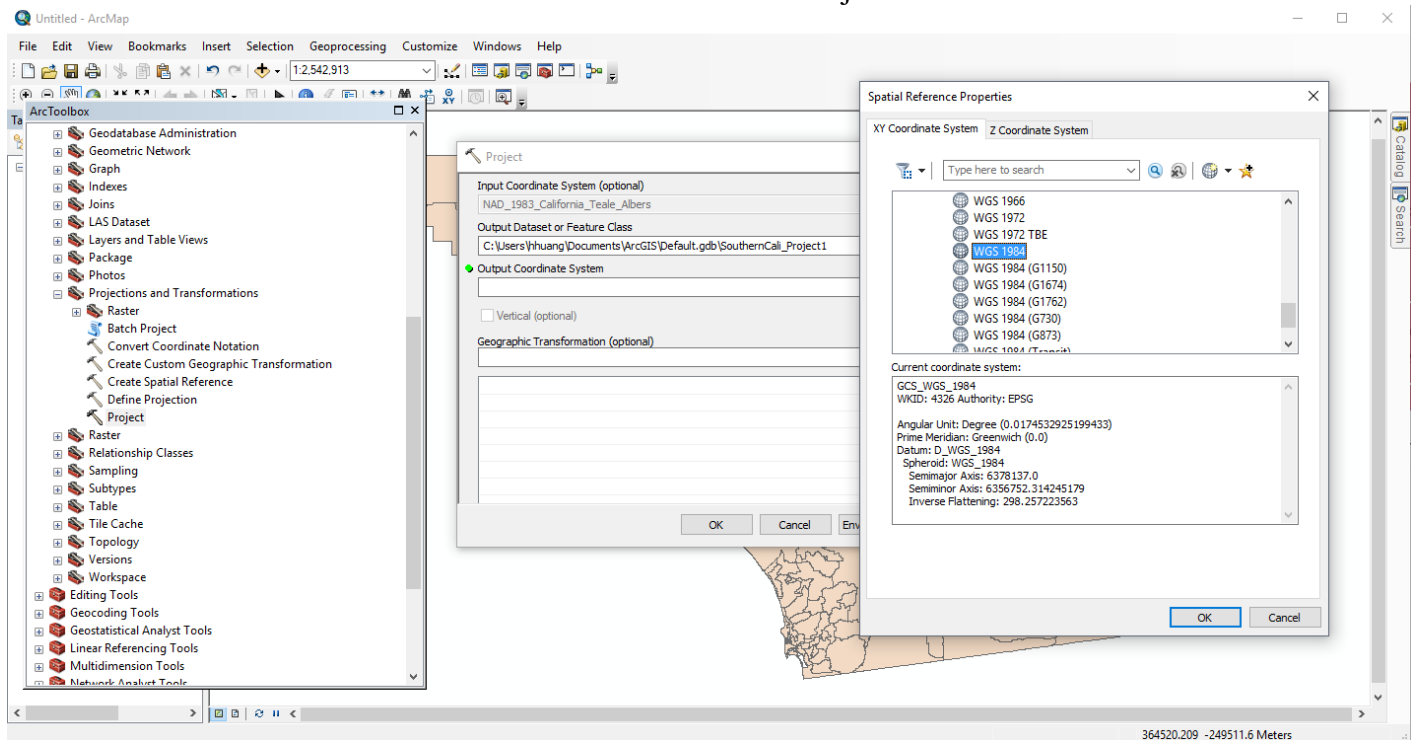


Fig.5 project shapefiles to WGS84 in ArcMap (if you original data projection is not WGS 1984)

After conversion, the three .js files should look like below:

1) Southern_CA_WGS84.js

```

1 var statesData=
2
3 [{"type":"FeatureCollection","features": [
4   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.57849202688142,33.453931825035724],[-117.57852602708697,33.45300282566732],[-117.5
5   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.6374205339703,33.6619248461946],[-117.63803505337673,33.66181104556046],[-117.638
6   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.4598290251846,33.69171885908477],[-117.45975302513125,33.691656859534],[-117.4594
7   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.69451205936643,33.60698983698452],[-117.69448205882883,33.60697483660626],[-117.69
8   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.69451205936643,33.60698983698452],[-117.69467205855997,33.60681683638954],[-117.6
9   {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.99940513323668,33.88817985125504],[-117.99919791349639,33.8881151994958],[-117.999
10  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.8538020970879,33.742524843333555],[-117.85388009673636,33.74252284298219],[-117.85
11  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.93271811522933,33.80323484557622],[-117.9327151150917,33.80309484571061],[-117.932
12  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.84534108873791,33.65523783414093],[-117.8449120886444,33.65500483402301],[-117.844
13  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-118.01095912976832,33.83191084437902],[-118.01095912993999,33.8318838441634],[-118.01
14  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.88563211374748,33.89329485881254],[-117.8856461144825,33.89311485837195],[-117.885
15  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.8538020970879,33.742524843333555],[-117.85310209610503,33.74253784313989],[-117.85
16  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.79521208901711,33.7668348490951],[-117.7952420885268,33.7667848489291],[-117.795368
17  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.89450210551527,33.767220843500716],[-117.89495510525913,33.766699843879174],[-117.
18  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.91520310607523,33.7287998383824],[-117.91526210614931,33.72861083848932],[-117.915
19  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.86838611507798,33.94594086535573],[-117.86882911548346,33.94559086533955],[-117.8
20  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.90672311470531,33.85379885259318],[-117.90672211384616,33.853693852992485],[-117.9
21  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.78329910065679,33.94641586979771],[-117.78308710060007,33.946264870501444],[-117.7
22  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.67376107633808,33.87083586756453],[-117.67312707572708,33.870256667706146],[-117.6
23  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.74375207080375,33.65575983896505],[-117.74365407076719,33.655637839308625],[-117.7
24  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.86764209515788,33.69178483677118],[-117.86768209524766,33.69173483661314],[-117.867
25  {"type":"Feature","geometry":{"type":"Polygon","coordinates": [[[-117.83457910207187,33.848912856427724],[-117.83440210142466,33.84877585668238],[-117.8

```

Fig.6 Southern_CA_WGS84.js

2) GWR_cancer_ism.js

```

1 var CANCER_SD_Imperial =
2
3 [{"MSSA_ID","CANCER_TYPE","Indirect standardized mortality" ]
4 ["115.1","Breast Cancer","0.643544863" ],
5 ["115.2a","Breast Cancer","0.819988419" ],
6 ["115.2b","Breast Cancer","0.995169547" ],
7 ["115.2c","Breast Cancer","0.695791179" ],
8 ["115.2d","Breast Cancer","1.055926463" ],
9 ["116a","Breast Cancer","0.63224307" ],
10 ["116b","Breast Cancer","0.534530189" ],
11 ["116c","Breast Cancer","0.884676042" ],
12 ["116d","Breast Cancer","0.784395703" ],
13 ["116e","Breast Cancer","0.818367116" ],
14 ["116f","Breast Cancer","0.82971925" ],
15 ["116g","Breast Cancer","0.578078139" ],
16 ["116h","Breast Cancer","1.148413347" ],
17 ["116i","Breast Cancer","0.700043458" ],
18 ["116j","Breast Cancer","0.92106507" ],
19 ["116k","Breast Cancer","0.933522366" ],
20 ["116l","Breast Cancer","0.824094691" ],
21 ["116m","Breast Cancer","0.738617574" ],
22 ["116n","Breast Cancer","0.783282542" ],
23 ["116o","Breast Cancer","0.811905016" ],
24 ["116p","Breast Cancer","0.851689328" ],
25 ["116q","Breast Cancer","0.950479753" ],

```

```

241 ["77.2","Breast Cancer","0.783454856" ],
242 ["77.4","Breast Cancer","0.438957132" ],
243 ["78.2p","Breast Cancer","0.705009376" ],
244 ["115.1","Colorectal Male","0.769570371" ],
245 ["115.2a","Colorectal Male","0.991212735" ],
246 ["115.2b","Colorectal Male","1.177686518" ],
247 ["115.2c","Colorectal Male","0.598130423" ],
248 ["115.2d","Colorectal Male","0.908813285" ],
249 ["116a","Colorectal Male","1.615536247" ],
250 ["116b","Colorectal Male","1.169094942" ],
251 ["116c","Colorectal Male","1.35745215" ],
252 ["116d","Colorectal Male","0.82471408" ],
253 ["116e","Colorectal Male","1.527404345" ],
254 ["116f","Colorectal Male","1.349934729" ],
255 ["116g","Colorectal Male","1.266494269" ],
256 ["116h","Colorectal Male","1.305976796" ],
257 ["116i","Colorectal Male","1.785397984" ],
258 ["116j","Colorectal Male","0.888544798" ],
259 ["116k","Colorectal Male","1.137096579" ],
260 ["116l","Colorectal Male","0.865114043" ],

```

Fig.7 GWR_cancer_ism.js

3) Socioeconomic.j

```

var census =
[
["MSSA ID","Breast Cancer","Breast Cancer Local R square ","Breast Cancer Residual","Breast Cancer % of Black population","Breast Cancer % of Hispani
["115.1","Breast Cancer","0.131369031","-0.197288376","-2.092917587","-0.088311642","-0.06234651","0.04565273","-0.076656747","Colorectal Male","0.36
["115.2a","Breast Cancer","0.176116634","0.002904708","-3.287638553","0.025574068","-0.0807311","0.076718392","-0.092755395","Colorectal Male","0.364
["115.2b","Breast Cancer","0.154422459","0.164897597","-2.594783034","-0.085376804","-0.076732547","0.041677684","-0.097488897","Colorectal Male","0.
["115.2c","Breast Cancer","0.162469671","-0.055094177","-1.430772525","0.008303895","-0.074158392","0.086172892","-0.069556415","Colorectal Male","0.
["115.2d","Breast Cancer","0.188063611","0.143158352","-0.884277329","0.109721789","-0.081063629","0.127353134","-0.05798008","Colorectal Male","0.35
["116a","Breast Cancer","0.328799664","-0.213710792","1.617606221","0.131191827","0.03036218","0.096877157","0.046275266","Colorectal Male","0.069618
["116b","Breast Cancer","0.233897283","-0.030928659","1.105666101","-0.010286198","-0.065671402","0.075109788","-0.075030853","Colorectal Male","0.36
["116c","Breast Cancer","0.282068532","0.088562115","1.578579784","0.061589459","0.007299165","0.069112649","-0.009266702","Colorectal Male","0.13971
["116d","Breast Cancer","0.243615544","0.066621043","0.487475443","0.157373298","-0.07789639","0.133097193","-0.069010952","Colorectal Male","0.41834
["116e","Breast Cancer","0.359101854","-0.079629458","1.578915032","0.172854484","0.04032064","0.086497474","0.026080694","Colorectal Male","0.187095
["116f","Breast Cancer","0.250997974","0.057506004","1.509850887","-0.00370855","-0.038093978","0.132127897","0.04222376","Colorectal Male","0.099473
["116g","Breast Cancer","0.245621307","-0.159887851","1.0248583","0.006956274","-0.07056251","0.076371888","-0.087353917","Colorectal Male","0.409505
["116h","Breast Cancer","0.229469205","0.324413568","0.735021001","0.008273469","-0.08508506","0.103678856","-0.069150997","Colorectal Male","0.39156
["116i","Breast Cancer","0.238033967","-0.046074563","1.21266157","0.021277332","-0.030867421","0.068074506","-0.047896775","Colorectal Male","0.2992
["116j","Breast Cancer","0.253284456","0.061976604","1.160159923","0.050279964","-0.024593855","0.064259505","-0.056964282","Colorectal Male","0.3818
["116k","Breast Cancer","0.302904533","0.160539601","1.556771539","-0.016009749","-0.054425706","0.175106573","0.079231691","Colorectal Male","0.0807
["116l","Breast Cancer","0.234852768","0.063711559","1.436252207","0.000661878","-0.030885651","0.08688657","-0.012006621","Colorectal Male","0.16102
["116m","Breast Cancer","0.287689408","0.000219568","0.548982124","-0.098055644","-0.136405643","0.21214613","0.028134837","Colorectal Male","0.29198
["116n","Breast Cancer","0.258173109","0.021661672","-1.245340515","0.060758273","-0.127580315","0.194398032","-0.020296624","Colorectal Male","0.290
["116o","Breast Cancer","0.247066983","0.006984253","-0.158741044","0.130385066","-0.095720974","0.150104351","-0.06196571","Colorectal Male","0.3962
["116p","Breast Cancer","0.243843373","0.055232487","0.92851036","0.041863948","-0.056612453","0.075978978","-0.081348253","Colorectal Male","0.4354
["116q","Breast Cancer","0.204270159","0.1377968","1.256800751","-0.03800929","0.07207611","0.108133934","-0.02322583","Colorectal Male","0.25363180
["116r","Breast Cancer","0.245121183","0.188237581","1.343584418","0.023983583","-0.023130328","0.068302007","-0.037154933","Colorectal Male","0.2405

```

Fig.8 Socioeconomic.js

Tips: There is no much difference between csv and js, only js files has [] in each line and all the data is assigned to a variable named after you (e.g. var census = []). Be careful to keep the original variable names because these names are still used in the source code.

Once get these 3 js files, put them into your source code folder, in this case js folder. You can place it wherever you want, but remember to provide the correct directory in you source code.

Then, you can follow Dr.Su’s technical report, she provide step by step procedure about how to reuse the tool illustrated in the example of “San Diego_Imperial_final”. The procedure can be summarized as:

- ```
8 <title>Southern California Cancer Geospatial Modelling Viewer</title>
9
```

Southern California Car

- ```
341 <!--HHH CHANGE: title-->  
342 <font size="5" color="white"> &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;& Southern California Cancer Geospatial Modelling Viewer</font>  
343 </div>
```


Southern California Cancer Geospatial Modelling Viewer

- ```
524 <script type="text/javascript" src="Southern_CA_WGS84.js"></script>
525 <!--script type="text/javascript" src="cancer.js"></script-->
526 <!--script type="text/javascript" src="late_stage_dx_SD_Imperial_fake.js"></script>
527 <script type="text/javascript" src="GWR_cancer_ism.js"></script>
528 <script type="text/javascript" src="socioeconomic.js"></script>
529 <script type="text/javascript" src="header_descriptions.js"></script>
530 <script type="text/javascript" src="category_descriptions_master.js"></script>
531 <!--script type="text/javascript" src="MSSA_ACS_SD_Imperial_simple.js"></script-->
532 <!--script type="text/javascript" src="CENSUS2010_v2.js"></script-->
533 <!--script type="text/javascript" src="CENSUS2011_v2.js"></script-->
534 <!--script type="text/javascript" src="CENSUS2012_v2.js"></script-->
535 <!--script type="text/javascript" src="CENSUS2013_v2.js"></script-->
536 <script type="text/javascript" src="NoShown.js"></script>
537 <!--script src="test.js" type="text/javascript"></script-->
```

*socioeconomic.js* replaces *CENSUS2011\_v2.js*, *CENSUS2011\_v2.js* and *CENSUS2011\_v2.js*

#### 4. Change left menu

Select Cancer Type for Indirect Standardized

Mortality: Colorectal Male ▾  
Breast Cancer  
Colorectal Male

1) In the source code, first comment unnecessary “menu\_L2” and “menu\_L4”

```

369 <!-- <div id="menu_L2" style="background-color:#ffffff;width:245px;float:left;margin-bottom:0.1cm;">
370 <form name="OutcomeSelect" action="">
371 Outcome:
372 <select name="outcome" onChange="layerChange1()">
373 <option value="Death">Death</option>
374 <option value="Hospitalization">Hospitalization</option>
375 <option value="ED Discharge">ED Discharge</option>
376 </select>
377 </form>
378 </div> -->
379
380 <div id="menu_L3" style="background-color:#ffffff;width:345px;float:left;margin-bottom:0.1cm;">
381 <form name="CaseSelect" action="">
382 Case:
383 <select name="case" id="cancer_case" onChange="layerChange1()">
384 </select>
385 </form>
386 </div>
387
388 <!-- <div id="menu_L4" style="background-color:#ffffff;width:250px;float:left;margin-bottom:0.1cm;">
389 <form name="YearSelect1" action="">
390 Year:
391 <select name="year1" onChange="layerChange1()">
392 <option value="2010">2010</option>
393 <option value="2011">2011</option>
394 <option value="2012">2012</option>
395 <option value="2013" selected>2013</option>
396 <option value="Most Up-to-Date">Most up-to-date</option>
397 </select>
398 </form>
399 </div> -->

```

2) Second, put “display:none;” after menu\_L3 and menu 7

```

385 <div id="menu_L3" style="background-color:#ffffff;width:345px;float:left;margin-bottom:0.1cm; display:none;">
386 <form name="CaseSelect" action="">
387 Rate:
388 <select name="case" id="cancer_case" onChange="layerChange1()">
389 </select>
390 </form>
391 </div>
429 <div id="menu_L7" style="background-color:#ffffff;width:180px;float:right; margin-top:0cm; margin-right:0.9cm; margin-bottom:0.1cm; display:none;">
430 <button type="button" style="font-size:17px;width:200px;" onclick="corrleationAnalysis(disValue1, dispValue2, allValue1, allValue2, true)">Correl
431
432 </div>

```

3) Last, change menu\_L1 name to “Select Cancer Type for Indirect Sandardized Mortality”

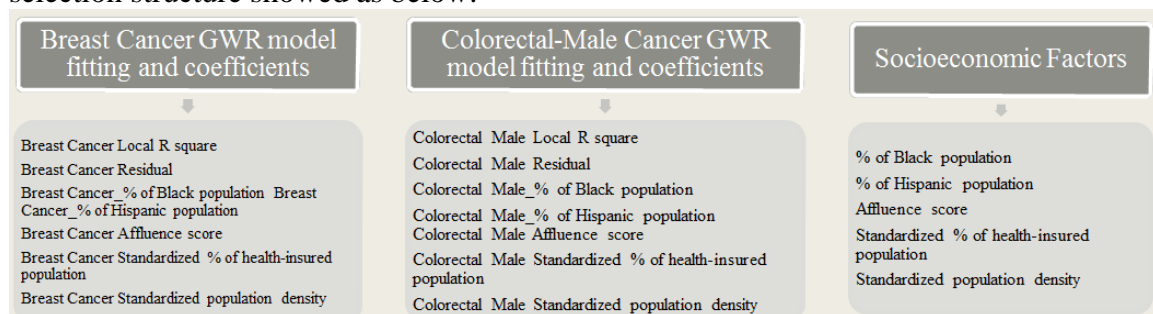
```

355 <!-- HHH CHANGE-->
356 <div id="menu_L1" style="background-color:#ffffff;width:365px;float:left;margin-bottom:0.1cm;">
357 <form name="ConditionSelect" action="">
358 Select Cancer Type for Indirect Standardized Mortality:
359 <select name="condition" id="cancer_type" onChange="layerChange1()">
360 </select>
361 </form>
362 </div>

```

## 5. Change right menu

In the right map menu, I group the 21 columns into 3 categories. Then based on your selection in first drop-down menu, the contents in second drop-down menu will change. The selection structure showed as below:



- 1) First, comment “menu\_R2”, then put “display:none;” behind “menu\_R3”

```

456 <div id="menu_R3" style="background-color:#ffffff;width:300px;float:left;margin-bottom:0.1cm;display:none;">
457 <form name="NormalizationSelect" action="">
458 Normalization:
459 <select name="normalization" id="normalization_options" onChange="layerChange2()">
460 <option value="none">none</option>
461 <option value="Total Population" selected>Total Population</option>
462 <option value="area">Area</option>
463 </select>
464 </form>
465 </div>
466
467 <!--div id="menu_R2" style="background-color:#ffffff;width:140px;float:left;margin-bottom:0.1cm;">
468 <form name="YearSelect2" action="">
469 Year:
470 <select name="year2" onChange="yearChange2()">
471 <option value="2010">2010</option>
472 <option value="2011">2011</option>
473 <option value="2012">2012</option>
474 <option value="2013" selected>2013</option>
475 <option value="Average">Average</option>
476 </select>
477 </form>
478 </div-->

```

- 2) Then, change names of menu\_R0 and menu\_R1 to “Select” and “Select Factors” separately.

```

438 <div id="input_area_right">
439 <div id="menu_R0" style="background-color:#ffffff;margin-bottom:0.1cm;">
440 <form name="layerSelect0" action="">
441 Select:
442 <select name="ACSdata0" id="ACSdata_SDFgroup" onChange="yearChange2()">
443 </select>
444 </form>
445 </div>
446
447 <div id="menu_R1" style="background-color:#ffffff;margin-bottom:0.1cm;">
448
449 <form name="layerSelect" action="">
450 Select Factors:
451 <select name="ACSdata" id="ACSdata_options" onChange="layerChange2()">
452 </select>
453 </form>
454 </div>

```

The customized menus looks like below:

Select Cancer Type for Indirect Standardized Mortality:

Left map menu

Select:

Select Factors:

Right map menu

6. Force overwrite of existing named objects

- 1) For Southern\_CA\_WGS84 data:

First, add the following lines(544-549) after <script...> to the code.

```

542 // Force overwrite of existing identically named objects.
543 // Polygon data: MSSA_SD_Imperial.js
544 var CA = statesData; // from MSSA_SD_Imperial.js
545 for (var j=0; j<CA.features.length; j++) {
546 CA.features[j].properties["SRA"] = CA.features[j].properties["MSSA_ID"];
547 CA.features[j].properties["SRA_Name"] = CA.features[j].properties["MSSA_ID"]
548 //console.log(CA.features[j].properties.SRA + ": " + CA.features[j].properties.SRA_Name);
549 }

```

2) For Cancer data: add the following lines to the code

```
551 // Force overwrite of existing identically named objects.
552 // Cancer data: late_stage_dx_SD Imperical.js
553 var CANCER = []; // from late_stage_dx_SD Imperical.js
554 //CANCER.push(["CONDITION", "OUTCOME", "YEAR", "SRANum", "case", "proportion"]);
555 CANCER.push(["CONDITION", "OUTCOME", "YEAR", "SRANum", "Indirect standardized mortality"]);
556 for (var j=1; j<CANCER_SD Imperical.length; j++) {
557 var col = CANCER_SD Imperical[j];
558 //CANCER.push([col[2], col[1], col[4], "col[0]", "col[6], col[7]]);
559 //HHH CHANGE
560 CANCER.push([col[1], "col[0]", "col[2]]);
561 }
```

3) In “Header\_descriptions”: add the following code to replace the old header descriptions

```
580 HEADER_DESCRIPTIONS =
581 {
582 //2010: ["AREA_SQMI", "POP", "DENTIST", "HISPANIC", "WHITE", "BLACK", "NHS_BLACK", "ASIAN", "AGE_65OVER", "AGE_18_64", "AGE_UNDER18", "AGE_UNDER5"],
583 "2010": ["MSSA_ID", "Breast Cancer", "Breast Cancer_Local R square", "Breast Cancer_Residual", "Breast Cancer_% of Black population", "Breast Cancer_% of Hispanic population", "Breast Cancer_Affluence score", "Breast Cancer_Standardized % of health-insured population", "Breast Cancer_Standardized population density", "Colorectal Male", "Colorectal Male_Local R square", "Colorectal Male_Residual", "Colorectal Male_% of Black population", "Colorectal Male_% of Hispanic population", "Colorectal Male_Affluence score", "Colorectal Male_Standardized % of health-insured population", "Colorectal Male_Standardized population density", "% of Black population", "% of Hispanic population", "Affluence score", "Standardized % of health-insured population", "Standardized population density"],
584 "2011": [],
585 "2012": [],
586 "2013": [],
587 "Definition": ["MSSA_ID",
588 "Breast Cancer",
589 "Breast Cancer_Local R square",
590 "Breast Cancer_Residual",
591 "Breast Cancer_% of Black population",
592 "Breast Cancer_% of Hispanic population",
593 "Breast Cancer_Affluence score",
594 "Breast Cancer_Standardized % of health-insured population",
595 "Breast Cancer_Standardized population density",
596 "Colorectal Male",
597 "Colorectal Male_Local R square",
598 "Colorectal Male_Residual", "Colorectal Male_% of Black population",
599 "Colorectal Male_% of Hispanic population",
600 "Colorectal Male_Affluence score",
601 "Colorectal Male_Standardized % of health-insured population",
602 "Colorectal Male_Standardized population density",
603 "% of Black population",
604 "% of Hispanic population",
605 "Affluence score",
606 "Standardized % of health-insured population",
607 "Standardized population density"
608]
609 }
```

4) For socioeconomic.js for the right map :

```
611 // Force overwrite of existing identically named objects.
612 // Census data: CENSUS2010_v2.js
613 var CENSUS2010 = []; // from CENSUS2010_v2.js
614 var CENSUS2011 = []; // from CENSUS2011_v2.js
615 var CENSUS2012 = []; // from CENSUS2012_v2.js
616 var CENSUS2013 = []; // from CENSUS2013_v2.js
617 var CENSUSAverage = [];
618 //CENSUS2010.push(["Year", "SRA Name", "SRA Num", "Region Num", "Region Name", "AREA_SQMI", "POP", "DENTIST", "HISPANIC", "WHITE", "BLACK", "NHS_BLACK", "ASIAN", "A
619 CENSUS2010.push(["Year", "SRA Name", "SRA Num", "Region Num", "Region Name", "MSSA_ID", "Breast Cancer", "Breast Cancer_Local R square", "Breast Cancer_Resi
620 CENSUS2011.push([]); // no header
621 CENSUS2012.push([]); // no header
622 CENSUS2013.push([]); // no header
623 CENSUSAverage.push([]); // no header
624 for (var j=1; j<CENSUS.length; j++) {
625 var col = CENSUS[j];
626 //CENSUS2010.push(["2010", col[4], col[0], "col[6], col[7], col[8], col[9], col[10], col[11], col[12], col[13], col[14], col[15], col[16], col[17]]);
627 CENSUS2010.push(["2010", col[0], col[0], "col[0], col[1], col[2], col[3], col[4], col[5], col[6], col[7], col[8], col[9], col[10], col[11], col[12], col[13], c
628 }
```

5) This program does not need to use the function “no show”. So two variables below need to be initialized.

```
594 MUST_REMOVE_SDFs = [];
595 NO_SHOWNS = [];
```

7. Comment all “selectedOutcom” and “YearSelect1” showed in the following lines. Your can use Ctrl+F to search for “selectedOutcom” and and “YearSelect1” quickly. This step is the result of debugging which is not listed in Dr.Su’s technical report,

```

2177 function layerChangel(direction) {
2178
2179 var selectedCondition = document.ConditionSelect.condition.value;
2180 //var selectedOutcom = document.OutcomeSelect.outcome.value;
2181 var selectedCase = document.CaseSelect.case.value;
2182 //var selectedYear = document.YearSelect1.year1.value;
2183 var classification = document.classSelect1.classified.value;
2184 var selectedColorNum = document.colorNumSelect1.colorNum.value;
2185 var selectedClassNum = document.classNumSelect1.classNum.value;
2186 var classCount = selectedClassNum * 1;
2187 var colorList = COLOR_CLASS[selectedColorNum+selectedClassNum];
2188 //alert("selectedCondition: " + selectedCondition);
2189 //alert("selectedOutcom: " + selectedOutcom);
2190 //alert("selectedCase: " + selectedCase);
2191 //alert("selectedYear: " + selectedYear);
2192 //alert("classification: " + classification);
2193 //alert("Color+Class: " + selectedColorNum+selectedClassNum);
2194 //alert(dump(COLOR_CLASS[selectedColorNum+selectedClassNum]));

```

```

2277 // save all cancer type for the correlations
2278 for (var i=1; i<CANCER.length; i++) {
2279 var cols = CANCER[i];
2280 //if (cols[iCondition] != selectedCondition) continue;
2281 // if (cols[iOutcom] != selectedOutcom) continue;
2282 // if (cols[iYEAR] != selectedYear) continue;
2283 // var condition = cols[iCondition];
2284 var condition = cols[iCondition];
2285 //var NAME = cols[iGeography];
2286 var SRANum = cols[iSRANum];
2287 var value = cols[iCase];
2288 if (value == "") continue; // ???

```

```

2239 // Build cancer data here.
2240 for (var i=1; i<CANCER.length; i++) {
2241 var cols = CANCER[i];
2242 //alert(dump(cols));
2243 //alert("CONDITION: "+cols[iCondition]);
2244 //alert("OUTCOME: "+cols[iOutcom]);
2245 //alert("YEAR: "+cols[iYEAR]);
2246 //alert("selectedYear: "+selectedYear);
2247 if (cols[iCondition] != selectedCondition) continue;
2248 //if (cols[iOutcom] != selectedOutcom) continue;
2249 //if (cols[iYEAR] != selectedYear) continue;
2250 //var NAME = cols[iGeography];
2251 var SRANum = cols[iSRANum];
2252 var value = cols[iCase];
2253 if (value == "") continue;

```

```

1226 //message += document.OutcomeSelect.outcome.value + " due to ";
1227 message += document.ConditionSelect.condition.value;
1228 //if (document.YearSelect1.year1.value == "Most Up-to-Date") {
1229 // message += ", Most Up-to-Date Available Data during 2010 to 2013";
1230 //}
1231 //else{
1232 // message += " in " + document.YearSelect1.year1.value;
1233 //}

```



```

1312 //chart_L_title += document.OutcomeSelect.outcome.value + " due to ";
1313 chart_L_title += disease;
1314
1315 //if (document.YearSelect1.year1.value == "Most Up-to-Date") {
1316 // chart_L_title += ", Most Up-to-Date Available Data during 2010 to 2013";
1317 //}
1318 //else{
1319 // chart_L_title += " in " + document.YearSelect1.year1.value;
1320 //}
1321 //chart_L_title += " "
1322 //chart_L_title += document.YearSelect1.year1.value + " ";

```

```

1364 //chart_R_title += document.OutcomeSelect.outcome.value + " due to ";
1365 chart_R_title += document.ConditionSelect.condition.value ;
1366 //if (document.YearSelect1.year1.value == "Most Up-to-Date") {
1367 // chart_R_title += ", Most Up-to-Date Available Data during 2010 to 2013";
1368 //}
1369 //else{
1370 // chart_R_title += " in " + document.YearSelect1.year1.value ;
1371 //}

```

## 8. Change map center and minZoom and maxZoom according to your need

```

755 var center = [33.0, -116.9]; // put the coordiantes of the center of your map
756
757 var stamenOptions = {
758
759 minZoom: 7,
760 maxZoom: 12
761 };
762
763 var layer_1 = L.tileLayer('http://{s}.tile.stamen.com/toner-lite/{z}/{x}/{y}.png', stamenOptions);
764
765 var layer_2 = L.tileLayer('http://{s}.tile.stamen.com/toner-lite/{z}/{x}/{y}.png', stamenOptions);
766
767 var map1 = L.map('map1', {
768 layers: [layer_1],
769 center: center,
770 zoom: 10,

```