
*Technical Document*

# An Example of Reusing HealthWebMapper1.0: Southern California Cancer Geospatial Modelling Viewer

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## Abstract

This report introduces how to reuse the source code of “HealthWebMapper1.0” 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 (Fig.1)

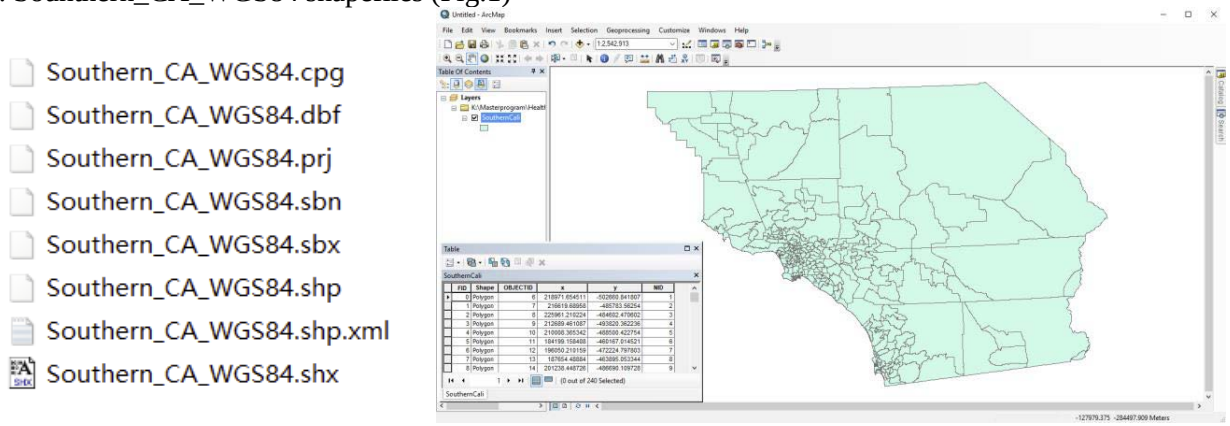



Fig. 1 SounthernCalifornia shapefiles and open it in ArcMap

Note that you may need to have the complete bundle of shpfile (including dbf,prj,sbn,sbx,shp,shp.xml,shx) and the shpfiles should include unique ID for each polygon. Theses IDs should match with the data table for left and right map.

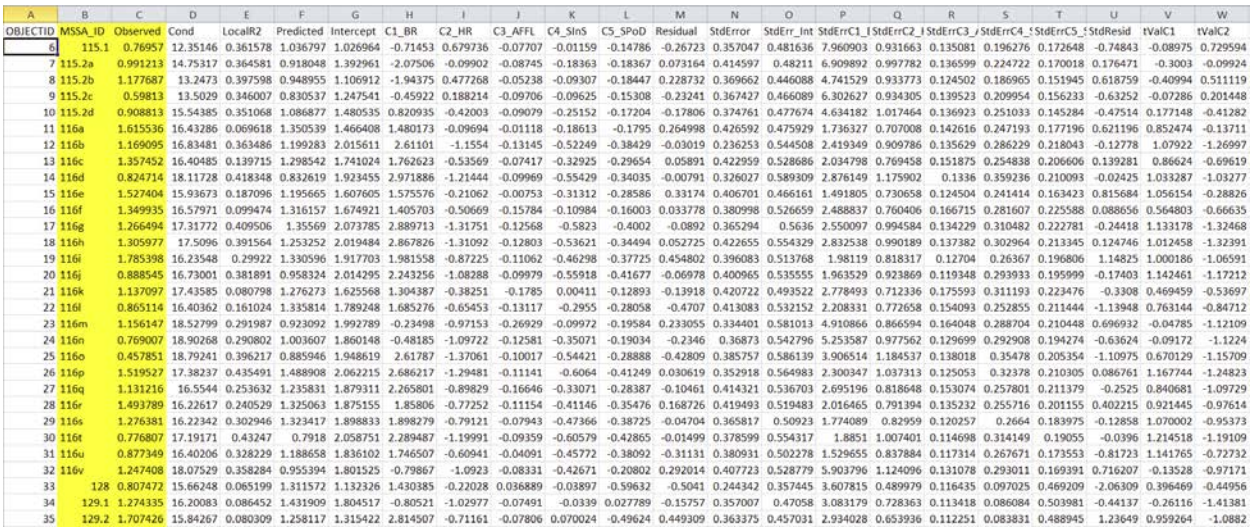
If the projection of your original shapefiles is not WGS 1984, transform your data in ArcGIS products: in ArcMap 10.6.1 the procedure is (Fig.4):

ArcMap→ArcToolBox→Data→Management Tools→Projections and Transformations→Project

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 | Cond | LocalR2 | Predicted | Intercept | C1_BR | C2_HR | C3_AFFL | C4_SlnS | C5_SPoD | Residual | StdError | StdErr_Int | StdErrC1_I | StdErrC2_I | StdErrC3_A | StdErrC4_S | StdErrC5_S | 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 | -1.07155 | -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 | -0.0779 | 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 | 0.95048 | 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 | 0.371979 | 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



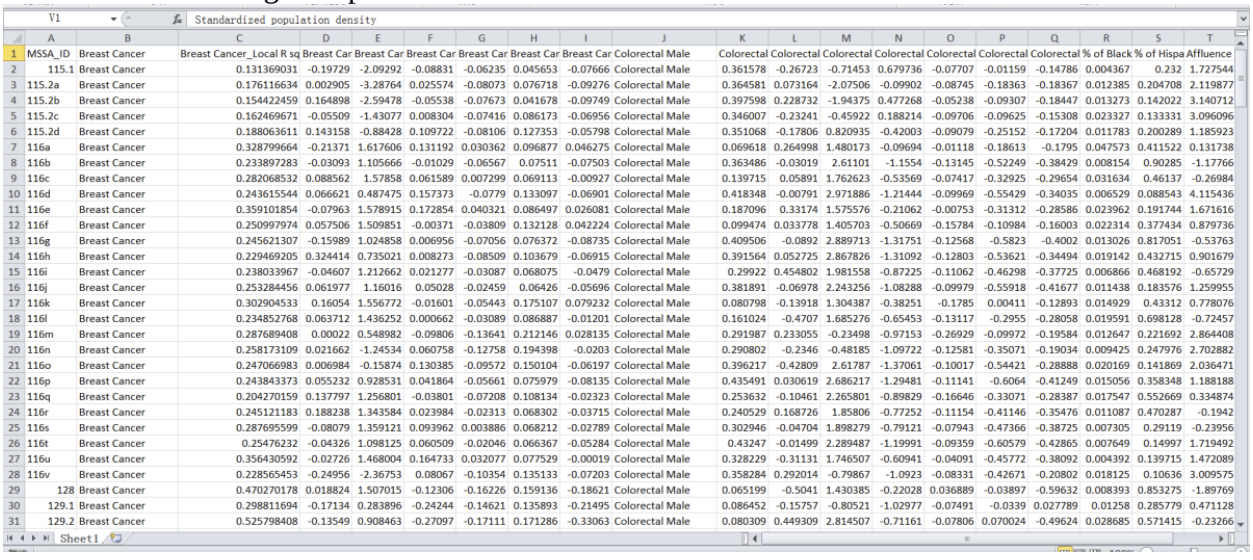
| OBJECTID | MSSA_ID | Observed | Cond | LocalR2 | Predicted | Intercept | C1_BR | C2_HR | C3_AFFL | C4_SInS | C5_SPoD | Residual | StdError | StdErr_Int | StdErrC1_I | StdErrC2_I | StdErrC3_A | StdErrC4_S | StdErrC5_S | StdResid | tValC1 | tValC2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 115.1 | 0.76957 | 12.35146 | 0.361578 | 1.036797 | 1.026964 | -0.71453 | 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 | 1.106912 | -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 | 1.017464 | 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 | 1.056154 | -0.28826 |
| 16 | 116f | 1.349935 | 16.57971 | 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 | 0.422655 | 0.554329 | 2.832538 | 0.990189 | 0.137382 | 0.302964 | 0.213345 | 0.124746 | 1.012458 | -1.32391 |
| 19 | 116i | 1.785398 | 16.23548 | 0.29922 | 1.330596 | 1.917703 | 1.981558 | -0.87225 | -0.11062 | -0.46298 | -0.37725 | 0.454802 | 0.396083 | 0.513768 | 1.98119 | 0.818317 | 0.12704 | 0.26367 | 0.196806 | 1.14825 | 1.000186 | -1.06591 |
| 20 | 116j | 0.888545 | 16.73001 | 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 | -0.63624 | -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 | -1.10975 | 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 | 0.257801 | 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 | 0.255716 | 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 | 0.120257 | 0.2664 | 0.183975 | -0.12858 | 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 | -0.08331 | -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 | -2.06309 | 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

As you can see, we have two excel files of data for the left map. You need to organize your data table according to your situation. In this case, I only need to column *MSSA_ID* and *Observed* from both csv files and a column describing *CANCER_TYPE*. Thus, data was arranged into one csv 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, attribute 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 — Standardized population density

| MSSA_ID | Breast Cancer | Breast Cancer_Local R sq | Breast Car | Breast Car | Breast Car | Breast Car | Breast Car | Colorectal Male | Colorectal | Colorectal | Colorectal | Colorectal | Colorectal | Colorectal | % of Black | % of Hispa | Affluence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 115.1 | Breast Cancer | 0.131369031 | -0.19729 | -2.09292 | -0.08831 | -0.06235 | 0.045653 | -0.07666 | Colorectal Male | 0.361578 | -0.26723 | -0.71453 | 0.679736 | -0.07707 | -0.01159 | -0.14786 | 0.004367 | 0.232 | 1.727544 |
| 115.2a | Breast Cancer | 0.176116634 | 0.002905 | -3.28764 | 0.025574 | -0.08073 | 0.076718 | -0.09276 | Colorectal Male | 0.364581 | 0.073164 | -2.07506 | -0.09902 | -0.08745 | -0.18363 | -0.18367 | 0.012385 | 0.204708 | 2.119877 |
| 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 | 0.013273 | 0.142022 | 3.140712 |
| 115.2c | Breast Cancer | 0.162469671 | -0.05509 | -1.43077 | 0.008304 | -0.07416 | 0.086173 | -0.06956 | Colorectal Male | 0.346007 | -0.23241 | -0.45922 | 0.188214 | -0.09706 | -0.09625 | -0.15308 | 0.023327 | 0.133331 | 3.096096 |
| 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 | 0.200289 | 1.185923 |
| 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 |
| 116b | Breast Cancer | 0.233897283 | -0.03093 | 1.105666 | -0.01029 | -0.06567 | 0.07511 | -0.07503 | Colorectal Male | 0.363486 | -0.03019 | 2.61101 | -1.1554 | -0.13145 | -0.52249 | -0.38429 | 0.008154 | 0.90285 | -1.17766 |
| 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 | -0.53569 | -0.07417 | -0.32925 | -0.29654 | 0.031634 | 0.46137 | -0.26984 |
| 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 | 0.088543 | 4.115436 |
| 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 |
| 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 |
| 116g | Breast Cancer | 0.245621307 | -0.15989 | 1.024858 | 0.006956 | -0.07056 | 0.076372 | -0.08735 | Colorectal Male | 0.409506 | -0.0892 | 2.889713 | -1.31751 | -0.12568 | -0.5823 | -0.4002 | 0.013026 | 0.817051 | -0.53763 |
| 116h | Breast Cancer | 0.229469205 | 0.324414 | 0.735021 | 0.008273 | -0.08509 | 0.103679 | -0.06915 | Colorectal Male | 0.391564 | 0.052725 | 2.867826 | -1.31092 | -0.12803 | -0.53621 | -0.34494 | 0.019142 | 0.432715 | 0.901679 |
| 116i | Breast Cancer | 0.238033967 | -0.04607 | 1.212662 | 0.021277 | -0.03087 | 0.068075 | -0.0479 | Colorectal Male | 0.29922 | 0.454802 | 1.981558 | -0.87225 | -0.11062 | -0.46298 | -0.37725 | 0.006866 | 0.468192 | -0.65729 |
| 116j | Breast Cancer | 0.253284456 | 0.061977 | 1.16016 | 0.05028 | -0.02459 | 0.06426 | -0.05696 | Colorectal Male | 0.381891 | -0.06978 | 2.243256 | -1.08288 | -0.09979 | -0.55918 | -0.41677 | 0.011438 | 0.183576 | 1.259955 |
| 116k | Breast Cancer | 0.302904533 | 0.16054 | 1.556772 | -0.01601 | -0.05443 | 0.175107 | 0.079232 | Colorectal Male | 0.080798 | -0.13918 | 1.304387 | -0.38251 | -0.1785 | 0.00411 | -0.12893 | 0.014929 | 0.43312 | 0.778076 |
| 116l | Breast Cancer | 0.234852768 | 0.063712 | 1.436252 | 0.000662 | -0.03089 | 0.086887 | -0.01201 | Colorectal Male | 0.161024 | -0.4707 | 1.685276 | -0.65453 | -0.13117 | -0.2955 | -0.28058 | 0.019591 | 0.698128 | -0.72457 |
| 116m | Breast Cancer | 0.287689408 | 0.00022 | 0.548982 | -0.09806 | -0.13641 | 0.212146 | 0.028135 | Colorectal Male | 0.291987 | 0.233055 | -0.23498 | -0.97153 | -0.26929 | -0.09972 | -0.19584 | 0.012647 | 0.221692 | 2.864408 |
| 116n | Breast Cancer | 0.258173109 | 0.021662 | -1.24534 | 0.060758 | -0.12758 | 0.194398 | -0.0203 | Colorectal Male | 0.290802 | -0.2346 | -0.48185 | -1.09722 | -0.12581 | -0.35071 | -0.19034 | 0.009425 | 0.247976 | 2.702882 |
| 116o | Breast Cancer | 0.247066983 | 0.006984 | -0.15874 | 0.130385 | -0.09572 | 0.150104 | -0.06197 | Colorectal Male | 0.396217 | -0.42809 | 2.61787 | -1.37061 | -0.10017 | -0.54421 | -0.28888 | 0.020169 | 0.141869 | 2.036471 |
| 116p | Breast Cancer | 0.243843373 | 0.055232 | 0.928531 | 0.041864 | -0.05661 | 0.075979 | -0.08135 | Colorectal Male | 0.435491 | 0.030619 | 2.686217 | -1.29481 | -0.11141 | -0.6064 | -0.41249 | 0.015056 | 0.358348 | 1.188188 |
| 116q | Breast Cancer | 0.204270159 | 0.137797 | 1.256801 | -0.03801 | -0.07208 | 0.108134 | -0.02323 | Colorectal Male | 0.253632 | -0.10461 | 2.265801 | -0.89829 | -0.16646 | -0.33071 | -0.28387 | 0.017547 | 0.552669 | 0.334874 |
| 116r | Breast Cancer | 0.245121183 | 0.188238 | 1.343584 | 0.023984 | -0.02313 | 0.068302 | -0.03715 | Colorectal Male | 0.240529 | 0.168726 | 1.85806 | -0.77252 | -0.11154 | -0.41146 | -0.35476 | 0.011087 | 0.470287 | -0.1942 |
| 116s | Breast Cancer | 0.287695599 | -0.08079 | 1.359121 | 0.093962 | 0.003886 | 0.068212 | -0.02789 | Colorectal Male | 0.302946 | -0.04704 | 1.898279 | -0.79121 | -0.07943 | -0.47366 | -0.38725 | 0.007305 | 0.29119 | -0.23956 |
| 116t | Breast Cancer | 0.25476232 | -0.04326 | 1.098125 | 0.060509 | -0.02046 | 0.066367 | -0.05284 | Colorectal Male | 0.43247 | -0.01499 | 2.289487 | -1.19991 | -0.09359 | -0.60579 | -0.42865 | 0.007649 | 0.14997 | 1.719492 |
| 116u | Breast Cancer | 0.356430592 | -0.02726 | 1.468004 | 0.164733 | 0.032077 | 0.077529 | -0.00019 | Colorectal Male | 0.328229 | -0.31131 | 1.746507 | -0.60941 | -0.04091 | -0.45772 | -0.38092 | 0.004392 | 0.139715 | 1.472089 |
| 116v | Breast Cancer | 0.228565453 | -0.24956 | -2.36753 | 0.08067 | -0.10354 | 0.135133 | -0.07203 | Colorectal Male | 0.358284 | 0.292014 | -0.79867 | -1.0923 | -0.08331 | -0.42671 | -0.20802 | 0.018125 | 0.10636 | 3.009575 |
| 128 | Breast Cancer | 0.470270178 | 0.018824 | 1.507015 | -0.12306 | -0.16226 | 0.159136 | -0.18621 | Colorectal Male | 0.065199 | -0.5041 | 1.430385 | -0.22028 | 0.036889 | -0.03897 | -0.59632 | 0.008393 | 0.853275 | -1.89769 |
| 129.1 | Breast Cancer | 0.298811694 | -0.17134 | 0.283896 | -0.24244 | -0.14621 | 0.135893 | -0.21495 | Colorectal Male | 0.086452 | -0.15757 | -0.80521 | -1.02977 | -0.07491 | -0.0339 | 0.027789 | 0.01258 | 0.285779 | 0.471128 |
| 129.2 | Breast Cancer | 0.525798408 | -0.13549 | 0.908463 | -0.27097 | -0.17111 | 0.171286 | -0.33063 | Colorectal Male | 0.080309 | 0.449309 | 2.814507 | -0.71161 | -0.07806 | 0.070024 | -0.49624 | 0.028685 | 0.571415 | -0.23266 |

Fig.4 socioeconomic.csv showed in EXCEL

It contains 22 columns, their headers are:
"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"

Before you start customizing HealthWebMapper1.0 source code for your own dataset, you may have multiple csv files. Take some time to decide which data you want to show in the left or right map, how does the drop-down menu will look like. Then, according to your design and original menu structure, organize the data into two different csv files for each map. Every csv files should have a header for each column.

Note that the csv file for left map may be different from the one for the right map due to the menu structure. In our case, we only want two one-layer menus for each map, the csv file for the left map only have one numeric data attribute in each row and its descriptive attribute will be in column(CANCER_TYPE) . However, for the right map, you can have multiple numeric attributes in one row(see example in fig.7)

## Part 2 Conversion of raw data to .js format

In HealthWebMapper1.0, data was displayed in maps with geojson format (one of the json formats for geospatial data). Thus, after organizing your raw data, two csv data table need to be converted to json format. Conversion procedure showed in Table 1.

| **Raw data to js files** | **Original data in HealthWebMapper to be replaced** | **Procedure** |
|---|---|---|
| Southern_CA_WGS84.shp to Southern_CA_WGS84.js | Polygon.js or MSSA_SD_Imperial.js | shp to js<br>1) ArcMap→ArcToolBox→Data Management Tools→Projections and Transformations→Project( Fig. 5)<br>2) Convert .shp with WGS 1984 projection to geojson through Mapshaper(http://mapshaper.org/)(Fig.6). *Note that you need to import the whole shpfile bundle in order to ensure geojson will include the projection and attribute information.<br>3) Edit geojson file by adding "var stateData="and save as .js file |
| GWR_cancer_ism.csv to GWR_cancer_ism.js | Cancer.js or late_stage_dx_SD_Imperial_fake.js | csv to js<br>1) Convert .cvs to geojson thru http://www.convertcsv.com/csv-to-json.htm (Fig 7,8&9)<br>2) Edit geojson file by adding "var CANCER_SD_Imperical="and save as .js file |
| socioeconomic.csv to socioeconomic.js | CENSUS2010_v2.js or MSSA_ACS_SD_Imperial_simple.js | csv to js<br>1) Convert .cvs to geojson via http://www.convertcsv.com/csv-to-json.htm<br>2) Edit geojson file by adding "var census="and save as .js file |

Table 1 converting processed raw data to json format

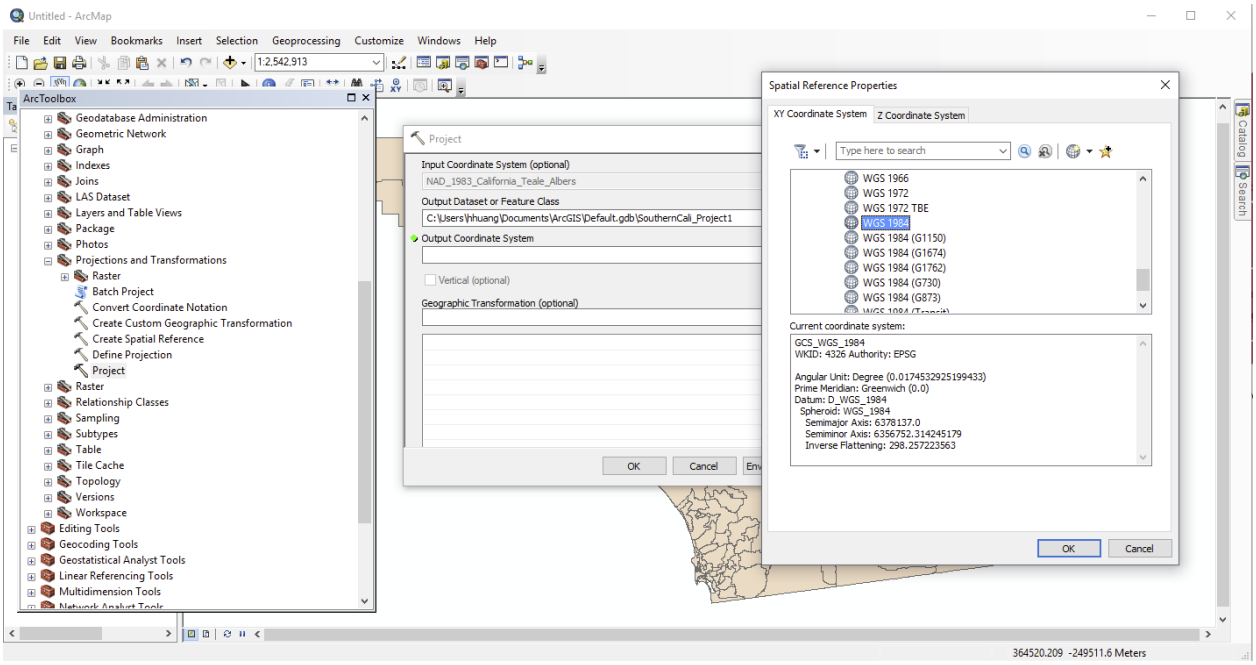



Fig.5 project shapefile to WGS84 in ArcMap (if you original data projection is not WGS 1984)

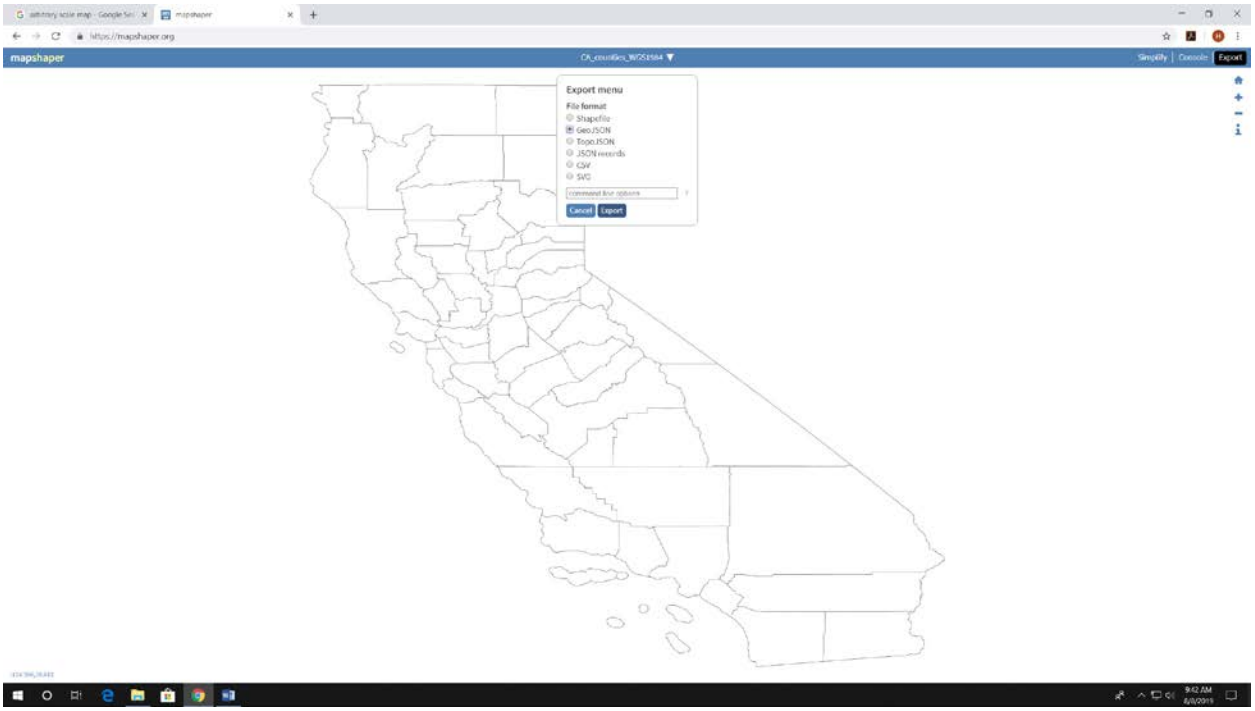



Fig.6 Use mapshaper to convert shapefile to geojson

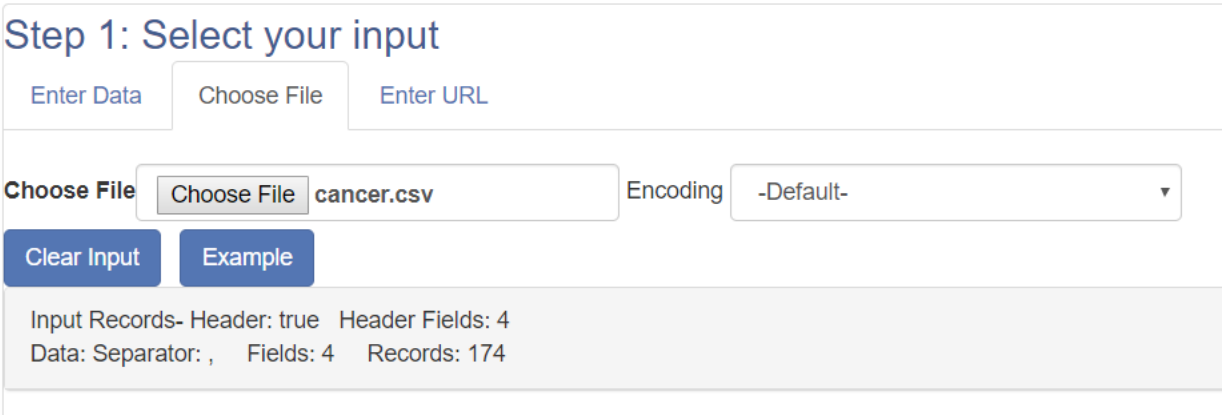



Fig.7 uploading a csv file

After uploading your csv file, remember to check the options in Step 3: “Force Wrap numeric values in double quotes” and “If to JSON Array, create array for column names with name = fields and Data name = data”

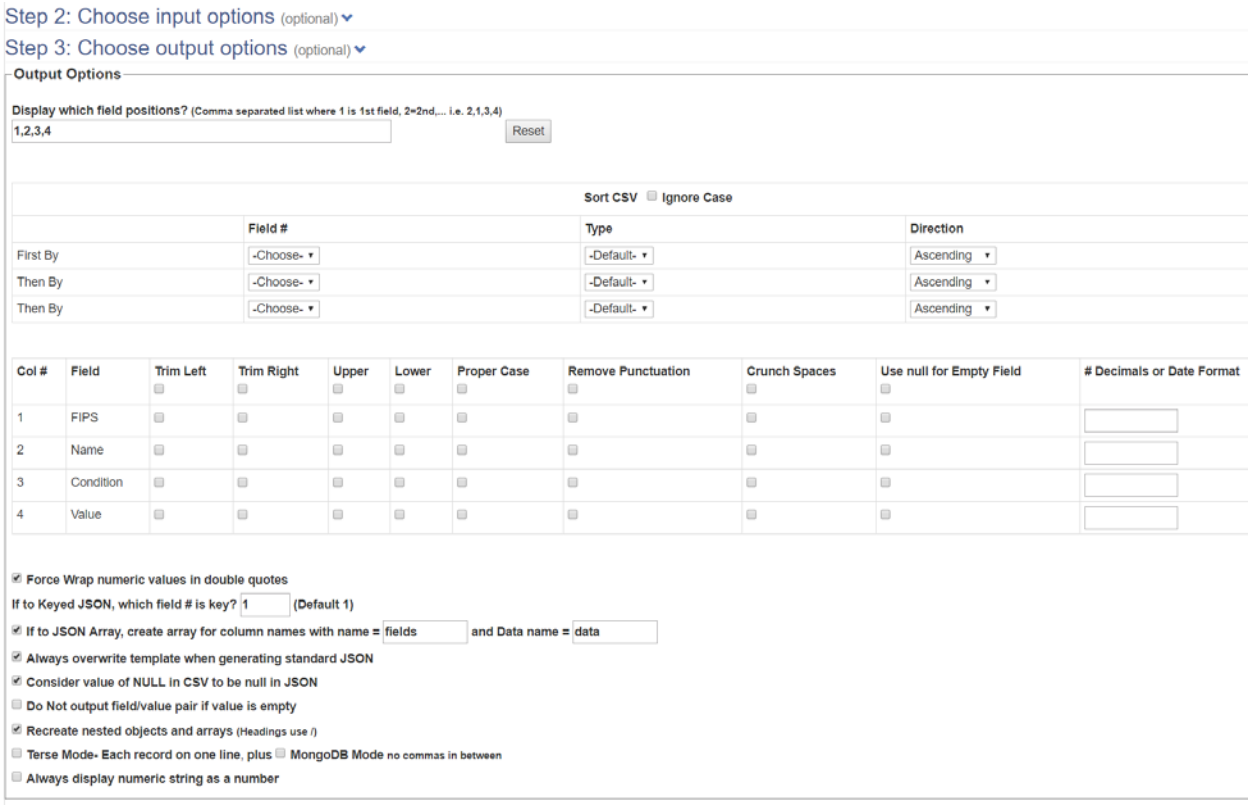



Fig.8 output setting

Click button “CSV To JSON Array” to preview the output, delete {} and “fields”: and “data”. Then assign an object name as instructed in the procedure table above and download result, save as .js. (refer to Fig.11&12)

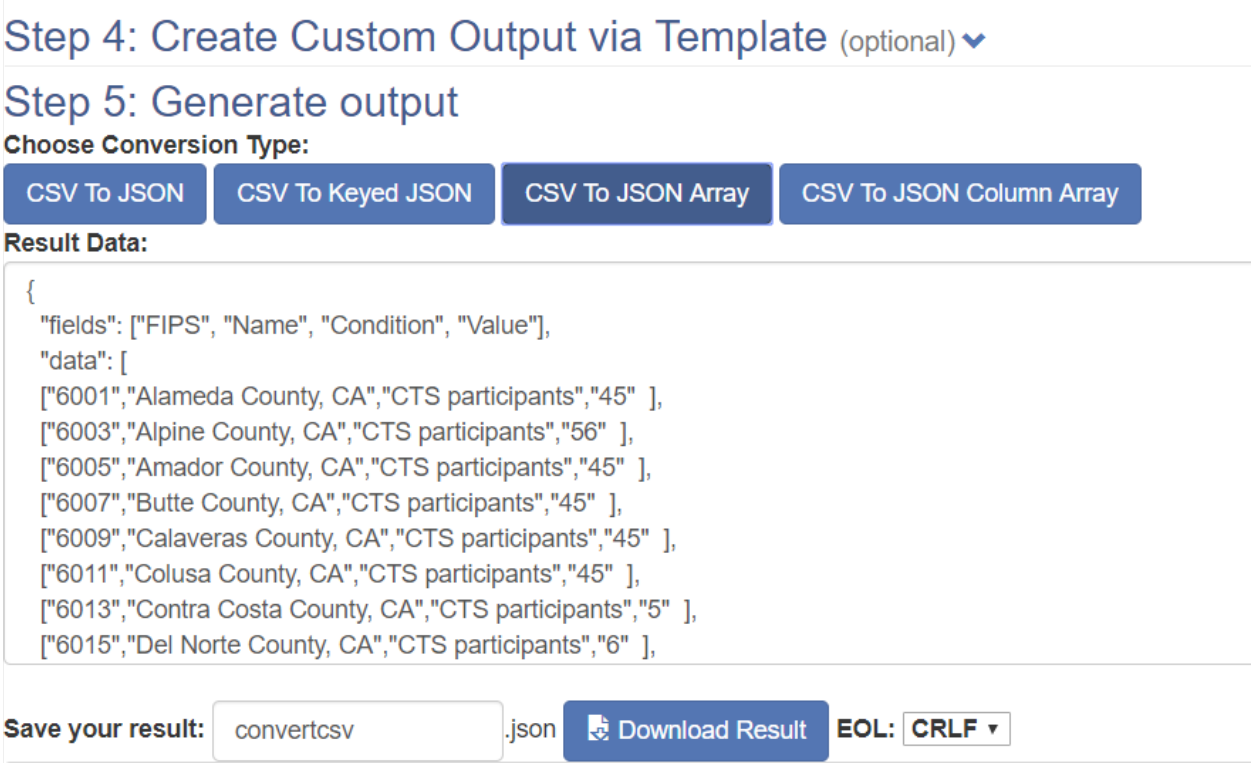



Fig.9 output editing

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

1) Southern_CA_WGS84.js

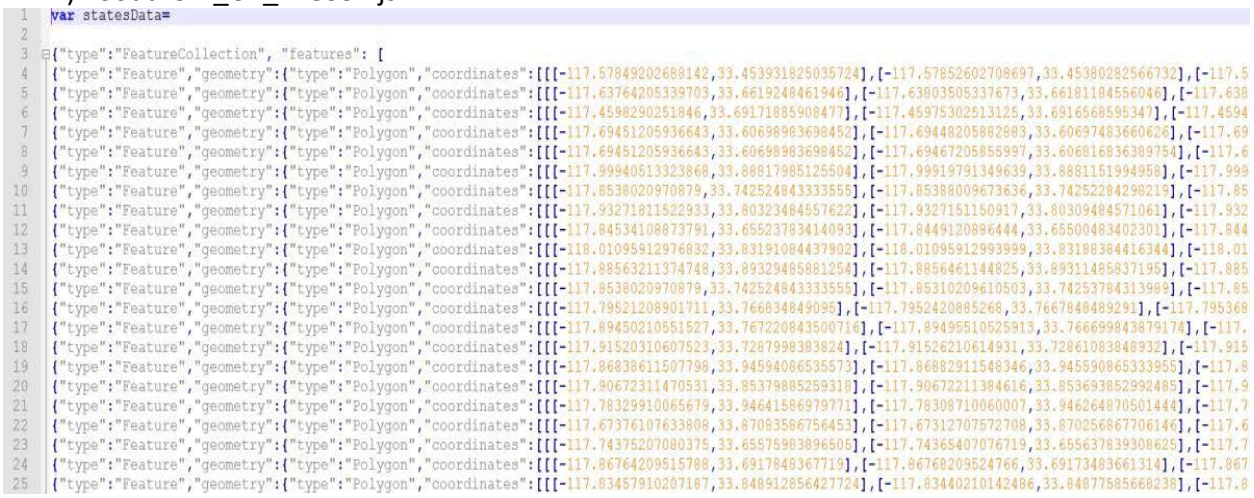



Fig.10 Southern_CA_WGS84.js

2) GWR_cancer_ism.js

```
var CANCER_SD_Imperical =
[
  ["MSSA_ID","CANCER_TYPE","Indirect standardized mortality"  ]
  ["115.1","Breast Cancer","0.643544863"  ],
  ["115.2a","Breast Cancer","0.819988419"  ],
  ["115.2b","Breast Cancer","0.995169547"  ],
  ["115.2c","Breast Cancer","0.695791179"  ],
  ["115.2d","Breast Cancer","1.055926463"  ],
  ["116a","Breast Cancer","0.63224307"  ],
  ["116b","Breast Cancer","0.534530189"  ],
  ["116c","Breast Cancer","0.884676042"  ],
  ["116d","Breast Cancer","0.784395703"  ],
  ["116e","Breast Cancer","0.818367116"  ],
  ["116f","Breast Cancer","0.82971925"  ],
  ["116g","Breast Cancer","0.578078139"  ],
  ["116h","Breast Cancer","1.148413347"  ],
  ["116i","Breast Cancer","0.700043458"  ],
  ["116j","Breast Cancer","0.92106507"  ],
  ["116k","Breast Cancer","0.933522366"  ],
  ["116l","Breast Cancer","0.824094691"  ],
  ["116m","Breast Cancer","0.738617574"  ],
  ["116n","Breast Cancer","0.783282542"  ],
  ["116o","Breast Cancer","0.811905016"  ],
  ["116p","Breast Cancer","0.851689328"  ],
  ["116q","Breast Cancer","0.950479753"  ],
  ["77.2","Breast Cancer","0.783454856"  ],
  ["77.4","Breast Cancer","0.438957132"  ],
  ["78.2p","Breast Cancer","0.705009376"  ],
  ["115.1","Colorectal Male","0.769570371"  ],
  ["115.2a","Colorectal Male","0.991212735"  ],
  ["115.2b","Colorectal Male","1.177686518"  ],
  ["115.2c","Colorectal Male","0.598130423"  ],
  ["115.2d","Colorectal Male","0.908813285"  ],
  ["116a","Colorectal Male","1.615536247"  ],
  ["116b","Colorectal Male","1.169094942"  ],
  ["116c","Colorectal Male","1.35745215"  ],
  ["116d","Colorectal Male","0.82471408"  ],
  ["116e","Colorectal Male","1.527404345"  ],
  ["116f","Colorectal Male","1.349934729"  ],
  ["116g","Colorectal Male","1.266494269"  ],
  ["116h","Colorectal Male","1.305976796"  ],
  ["116i","Colorectal Male","1.785397984"  ],
  ["116j","Colorectal Male","0.888544798"  ],
  ["116k","Colorectal Male","1.137096579"  ],
  ["116l","Colorectal Male","0.865114043"  ],
```

Fig.11 GWR_cancer_ism.js

3) Socioeconomic.js

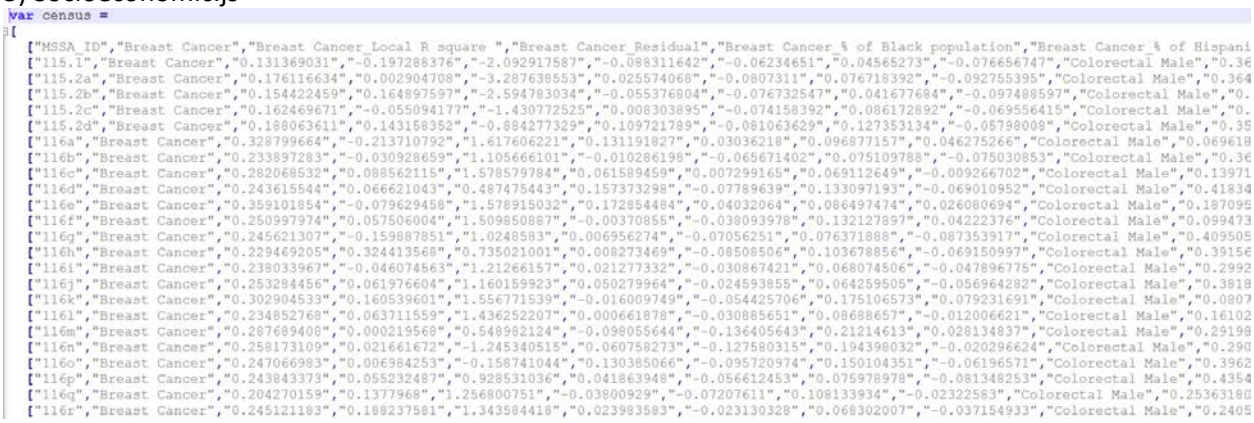



Fig.12 Socioeconomic.js

There is no much difference between csv and Json array, 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 the three json 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.

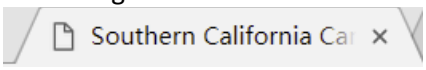
## Part 3 Customize source code of HealthWebMapper1.0

In Dr. Su's technical document, HealthWebMapper1.0 was reused for other datasets by forcing overwrite of existing identically named objects. She provides 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:

1. Change webpage title

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

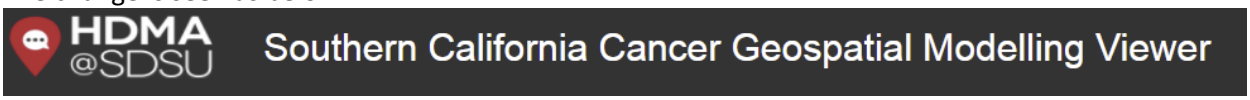
The change is seen as below:




2. Change header title

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

The change is seen as below:



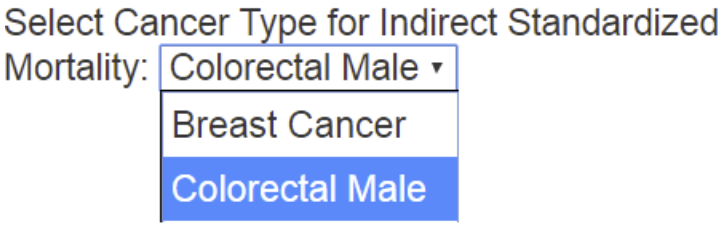
3. Replace js files

```
    <script type="text/javascript" src="Southern_CA_WGS84.js"></script>
    <!--script type="text/javascript" src="cancer.js"></script-->
    <!--script type="text/javascript" src="late_stage_dx_SD_Imperial_fake.js"></script
    <script type="text/javascript" src="GWR_cancer_ism.js"></script>
    <script type="text/javascript" src="socioeconomic.js"></script>
    <script type="text/javascript" src="header_descriptions.js"></script>
    <script type="text/javascript" src="category_descriptions_master.js"></script>
    <!--script type="text/javascript" src="MSSA_ACS_SD_Imperial_simple.js"></script-->
    <!--script type="text/javascript" src="CENSUS2010_v2.js"></script-->
    <!--script type="text/javascript" src="CENSUS2011_v2.js"></script-->
    <!--script type="text/javascript" src="CENSUS2012_v2.js"></script-->
    <!--script type="text/javascript" src="CENSUS2013_v2.js"></script-->
    <script type="text/javascript" src="NoShown.js"></script>
    <!--script src="test.js" type="text/javascript"></script-->
```

Southern_CA_WGS84.js replaces polygon.js,
GWR_cancer_ism.js replaces cancer.js,
socioeconomic.js replaces CENSUS2011_v2.js , CENSUS2011_v2.js and CENSUS2011_v2.js
Keep other .js files.

4. Change the left menu

In the left menu, wewant to visualize “Indirect standardized mortality” for both cancer types. The menu should look like below:




1) In the source code, first comment unnecessary “menu_L2” and “menu_L4”

```
<!--        <div id="menu_L2" style="background-color:#ffffff;width:245px;float:left;margin-bottom:0.1cm;">
            <form name="OutcomeSelect" action="">
                <span id="outcome_change">Outcome: </span>
                <select name="outcome" onChange="layerChange1()">
                    <option value="Death">Death</option>
                    <option value="Hospitalization">Hospitalization</option>
                    <option value="ED Discharge">ED Discharge</option>
                </select>
            </form>
        </div> -->

        <div id="menu_L3" style="background-color:#ffffff;width:345px;float:left;margin-bottom:0.1cm;">
            <form name="CaseSelect" action="">
                <span id="case_change">Case: </span>
                <select name="case" id="cancer_case" onChange="layerChange1()">
                </select>
            </form>
        </div>

<!--        <div id="menu_L4" style="background-color:#ffffff;width:250px;float:left;margin-bottom:0.1cm;">
            <form name="YearSelect1" action="">
                <span id="year_change">Year: </span>
                <select name="year1" onChange="layerChange1()">
                    <option value="2010" >2010</option>
                    <option value="2011">2011</option>
                    <option value="2012">2012</option>
                    <option value="2013" selected>2013</option>
                    <option value="Most Up-to-Date" >Most up-to-date</option>
                </select>
            </form>
        </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                 <span id="case_change">Rate: </span>
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(dispValue1, dispValue2, allValue1, allValue2, true)">Correl
431
432 </div>
```

3) Last, change menu_L1 name to “Select Cancer Type for Indirect Standardized Mortality”

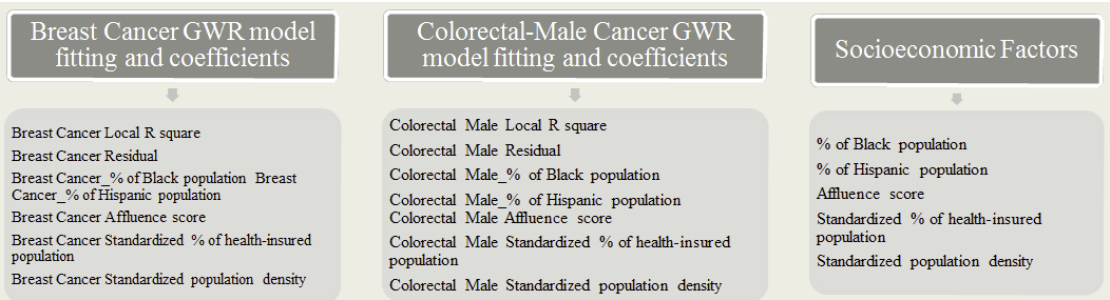
```
355 <!-- HHH CHANGE-->
356         <div id="menu_L1" style="background-color:#ffffff;width:365px;float:left;margin-bottom:0.1cm;">
357             <form name="ConditionSelect" action="">
358                 <span id="condition_change">Select Cancer Type for Indirect Standardized Mortality: </span>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

The customized menus looks like below:

Select Cancer Type for Indirect Standardized Mortality: Breast Cancer ▾

5. Change the right menu

In the right map menu, 21 columns of data attributes was grouped 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:



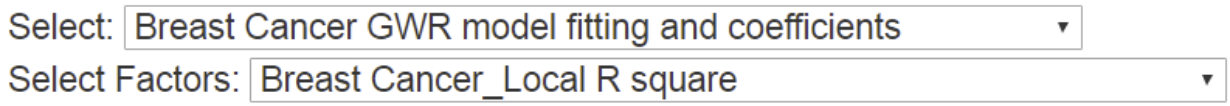

1) First, comment “menu_R2”, then put “display:none;” behind “menu_R3”

```
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                 <span id="normalization_change">Normalization: </span>
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                 <span id="year_change">Year: </span>
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.
The customized menus looks like below:

```
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                 <span id="layer_change0">Select:</span>
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                 <span id="layer_change">Select Factors: </span>
451                 <select name="ACSdata" id="ACSdata_options" onChange="layerChange2()">
452                 </select>
453             </form>
454         </div>
```

After customizing, the right menu looks like below:




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_Imperical.js
544         var CA = statesData;        // from MSSA_SD_Imperical.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

```
HEADER_DESCRIPTIONS =
{
    //"2010":["AREA_SQMI","POP","DENTIST","HISPANIC","WHITE","BLACK","NHS_BLACK","ASIAN","AGE_65OVER","AGE_18_64","AGE_UNDER18","AGE_UNDER5"],
    "2010":["MSSA_ID", "Breast Cancer", "Breast Cancer_Local R square", "Breast Cancer_Residual", "Breast Cancer_% of Black population", "Brea
    "2011":[],
    "2012":[],
    "2013":[],
    "Definition":["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"
                  ]
}
```

4) For socioeconomic.js for the right map:

```
// Force overwrite of existing identically named objects.
// Census data: CENSUS2010_v2.js
var CENSUS2010 = [];        // from CENSUS2010_v2.js
var CENSUS2011 = [];        // from CENSUS2011_v2.js
var CENSUS2012 = [];        // from CENSUS2012_v2.js
var CENSUS2013 = [];        // from CENSUS2013_v2.js
var CENSUSaverage = [];
//CENSUS2010.push(["Year","SRA Name","SRA Num","Region Num","Region Name","AREA_SQMI","POP","DENTIST","HISPANIC","WHITE","BLACK","NHS_BLACK","ASIAN","A
CENSUS2010.push(["Year","SRA Name","SRA Num","Region Num","Region Name","MSSA_ID", "Breast Cancer", "Breast Cancer_Local R square", "Breast Cancer_Resi
CENSUS2011.push([]);        // no header
CENSUS2012.push([]);        // no header
CENSUS2013.push([]);        // no header
CENSUSaverage.push([]);     // no header
for (var j=1; j<census.length; j++) {
    var col = census[j];
    //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]]);
    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
}
```

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

```
MUST_REMOVE_SDFs = [];
NO_SHOWNS = [];
```

9. Change map center and minZoom and maxZoom according to your need

```
        var center = [33.0, -116.9]; // put the coordiantes of the center of your map

        var stamenOptions = {

            minZoom: 7,
            maxZoom: 12
        };

        var layer_1 = L.tileLayer('http://{s}.tile.stamen.com/toner-lite/{z}/{x}/{y}.png', stamenOptions);

        var layer_2 = L.tileLayer('http://{s}.tile.stamen.com/toner-lite/{z}/{x}/{y}.png', stamenOptions);

        var map1 = L.map('map1', {
            layers: [layer_1],
            center: center,
            zoom: 10,
```

10. 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 layerChange1(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 +=  "</font>    &amp;     <font size='3' color='#008080'> "
1322    //chart_L_title += document.YearSelect1.year1.value + "</font>    &amp;     <font size='3' color='#008080'> ";
```

```
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        //}
```