Homework 10: Disease Cluster Analysis

PHC 6937: Spatial Epidemiology

For this assignment you will investigate clustering of *P. falciparum* parasite rates in an African country. Data and appropriate shapefiles are provided through Sakai. Please perform the following tasks and include all requested outputs and answers in a separate Word file numbered according to step:

1. Choose a country to investigate, there are four options: Brazil, Ghana, Kenya, and Tanzania. State your choice in your word file.
2. Import the World and country shapefile of choice into ArcGIS. Import the country’s data.
3. Perform a global autocorrelation on the parasite rate variable with either ArcGIS or GeoDa. If using GeoDa, right click on plot and select “Display Statistics”. Copy html output if using ArcGIS or the Moran’s I plot if using GeoDa. Interpret these statistics.
4. Perform a local autocorrelation to show clusters using either ArcGIS (either local Moran’s I or Getis-Ord Gi) or GeoDa. Add any outputted maps to your Word file. Include legends and titles as appropriate.
5. Describe you what you see in your maps in a few sentences.