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| **Design Brief** |

**Project Title: Cancer in Developing Countries**

**Client:**

**Lucas Herzberg**

**Andrew Martinez**

**Designer(s):**

**Kayla Kim**

**Justin Ngo**

**Problem Statement:**

Countries with a low GDP (Sub $25,000) are not getting the proper cancer treatment. Due to generating sub-standard gross domestic product per capita, the inhabitants of those countries are not able to access proper treatment as to prevent the resulting symptoms from cancer and death. There is much show of concern among the issues behind cancer as demonstrated by Vanita Sharma of Medscape where she believes “there are four key components to cancer control: cancer prevention, early detection, diagnosis and treatment and palliation. Developing countries face major challenges in each of these four areas”. Although the cancer rates remain somewhat lower than countries with a high GDP per capita as stated by the Dana-Farber Cancer Institute, death resulting by cancer per cancer incidence is still marginally higher in these low GDP per capita countries.

**Sources:**

<http://www.medscape.com/viewarticle/752627_2>

<https://prezi.com/kxsx8pajfhgq/gdp-per-capita-vs-cancer-death-rate/>

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**Question:**

How does a country’s GDP per capita correlate with its cancer mortality rate?

(Are GDP and cancer rates correlated?)

(How could low GDP countries develop better treatments if they were to acquire more money?)

**Article Links:**

<https://www.ncbi.nlm.nih.gov/pubmed/24036692> (Breast cancer vs GDP)

<http://www.huffingtonpost.ca/jim-harris/gdp-growth_b_4490415.html> (Cancer is good for GDP growth)

**Data Links:**

Cancer Filter Master Link (2012):

<http://globocan.iarc.fr/Pages/summary_table_pop_sel.aspx>

Countries GDP per capita Master Link (2012):

<http://databank.worldbank.org/data/reports.aspx?source=2&series=NY.GDP.PCAP.CD&country=>

**Designer Statement:**

The purpose of the data we are displaying is for our audience to be able to easily view the differences in cancer mortality rate between high, average, and low GDP per capita countries. Our goal is that through viewing this data, it will influence people to realize that by helping these (low or high GDP) countries we can focus on areas with the most issues with cancer and aid them in lowering mortality rates.The style we are aspiring for is an clean, engaging, and easy to interpret graph that will not require you to “read between the lines”. Because cancer is such a widespread issue, the gravity of the situation is considerable. Many people die day to day as the result of cancer and numerous people have dedicated their lives to cancer research. Our inspiration to form this model is to show how GDP per capita and cancer rates are correlated in order to present a clear issue others can focus on.

**Constraints:**

* Deadline: Week from 2/2/17 (2/9/17)
* Don’t make ridiculously long
* Don’t make ridiculously short
* Short/Concise
* Compare cancer mortality rates with high, average, and low GDP per capita countries
* Create either a histogram with rates or bar graph with comparing GDP/Cancer rate
* Don’t make plain; Audience must see as visually appealing

**Conclusion:**

How does a country’s GDP per capita correlate with its cancer mortality rate? The initial question itself was not provided by the clients, therefore my partner and I created one concerning the statement proclaiming that “Countries with a low GDP (Sub $25,000) are not getting the proper cancer treatment.” Through our code and data from Globocan.com and Databank.com, my partner and I conclude that low GDP countries do not have a higher rate of cancer mortality. The cancer mortality ranged between 50 and 150 ASR (Age-standardized rate) regardless of a country's GDP. The only exception were the United States and and South Korea which both had a much higher cancer rate than the other countries. Personally, we believe that the information, ergo our question, was biased on stereotypes that “third world countries” are not rich and cannot support the people who live in it. There is another possibility that the countries that the countries that *are* richer, may have better machines to diagnose people, or even over diagnose people.