

# VISUALIZING THE FIGHT AGAINST CANCER

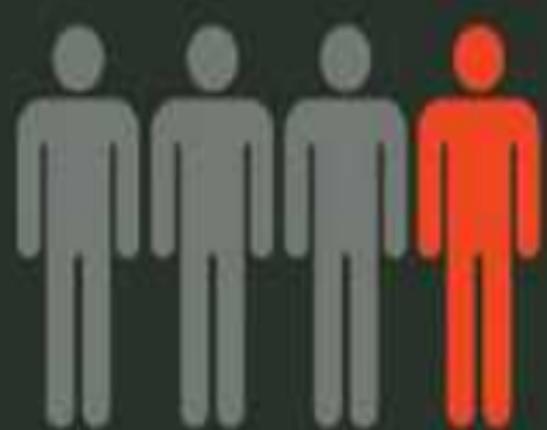


VISUALIZING101

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ABHISHEK JAIN  
NIKITA GUPTA



1 in 3  
people will  
contract cancer.



1 in 4  
people will die  
from the disease.

**20% of all cancers worldwide are caused by a chronic infection.**

I.E., human papillomavirus (HPV) causes cervical cancer and hepatitis B virus (HBV) causes liver cancer.

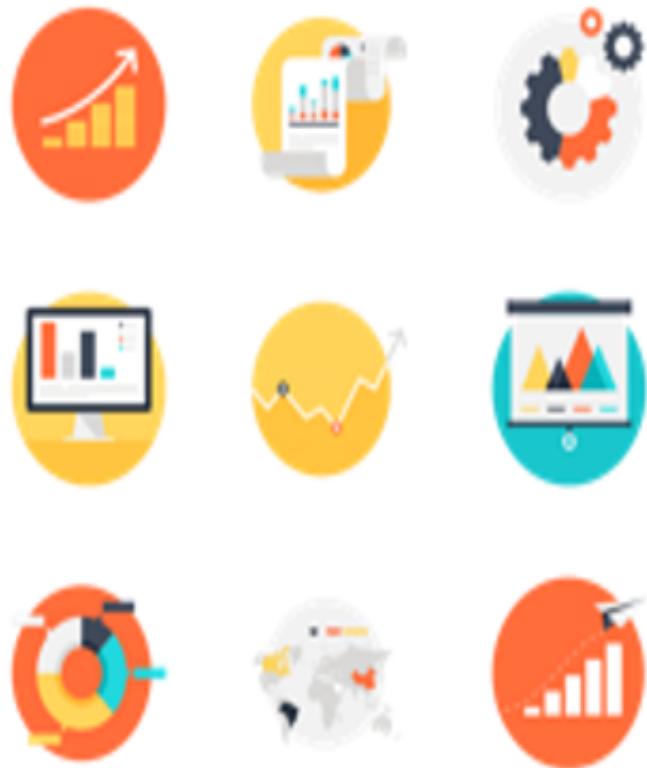
**Within five years,  
cancer will surpass heart disease  
as the leading cause of death**

according to the American Hospital Association.









# All cancers

Taking any type of Hormone Replacement Therapy  
Having at least 6 grams a day

Breastfeeding each child for less than 6 months

Being moderately active for less than 150 minutes a week

Having less than 23 grams of fibre a day

Being exposed to any ionising radiation, including background levels such as those released from the earth

Eating any red or processed meat

Exposure to cancer-causing infections like HPV and Hepatitis B or C

Getting more UV than was typical for people born in 1903

Occupation Being exposed to cancer-causing chemicals or conditions at work

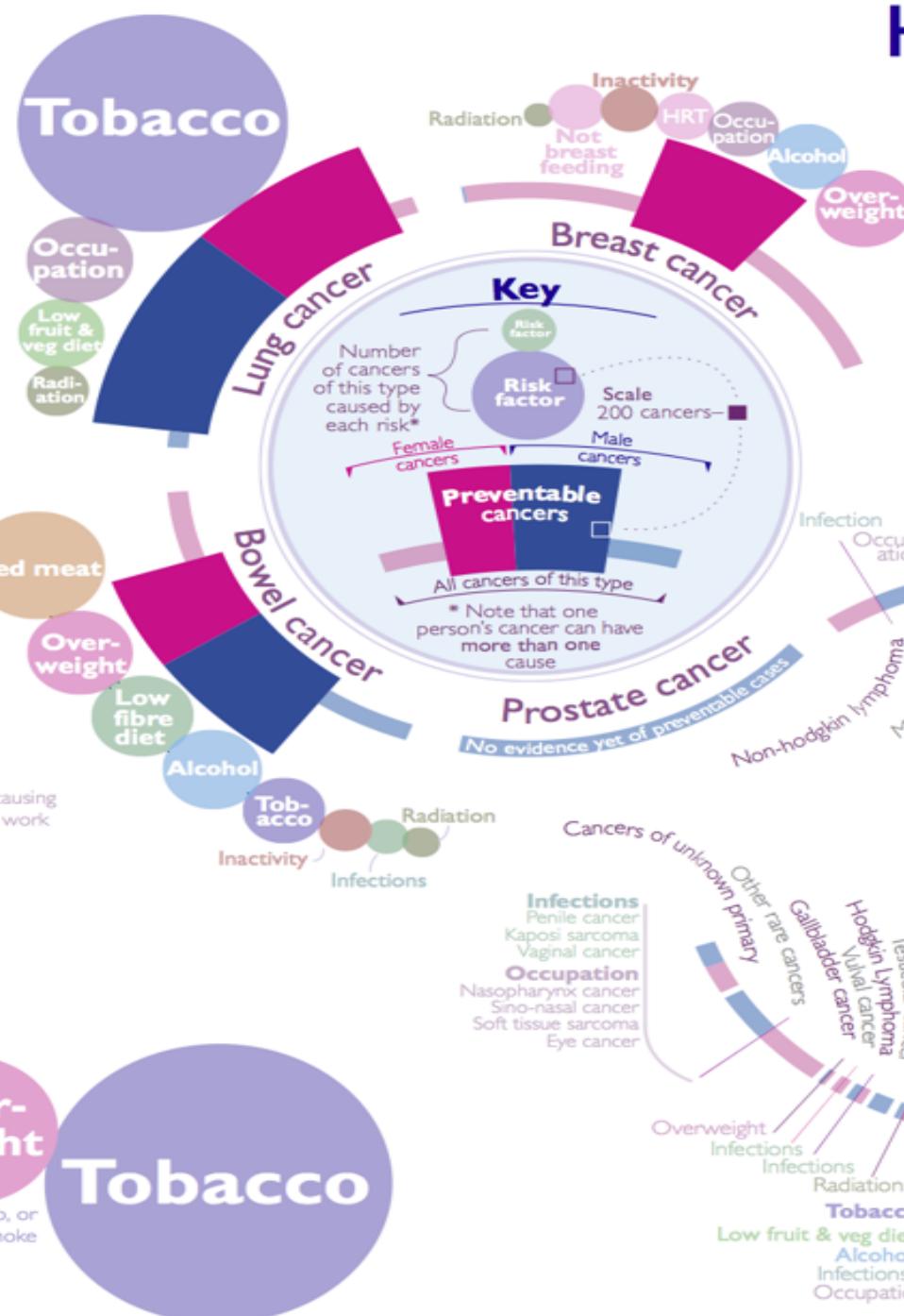
Alcohol Drinking any type of alcohol

Low fruit & veg diet Getting fewer than five portions a day

Over-weight Having a BMI of 25 kg/m<sup>2</sup> or over

Tobacco Smoking or chewing any form of tobacco, or exposure to environmental tobacco smoke

*Together we will beat cancer*

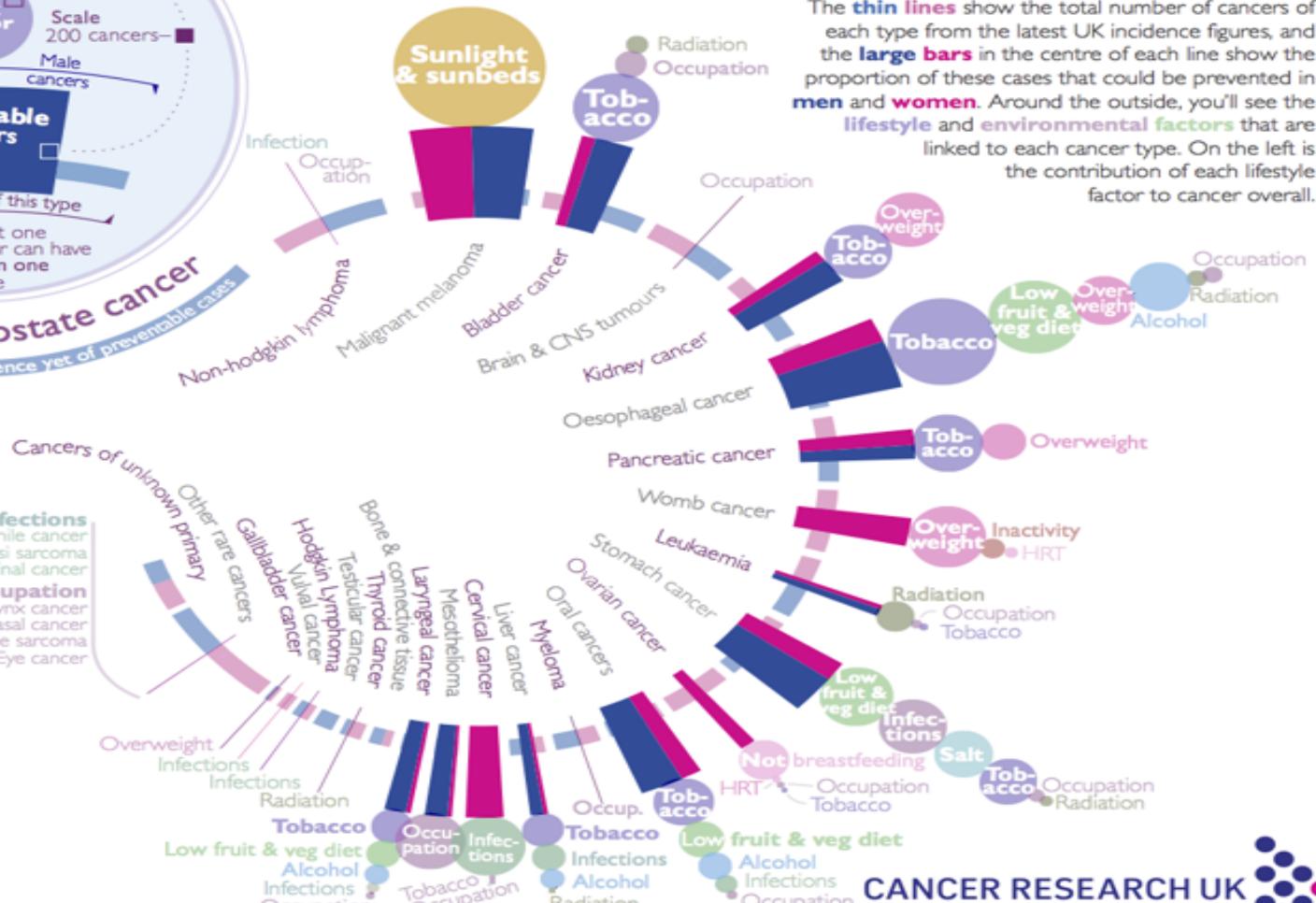


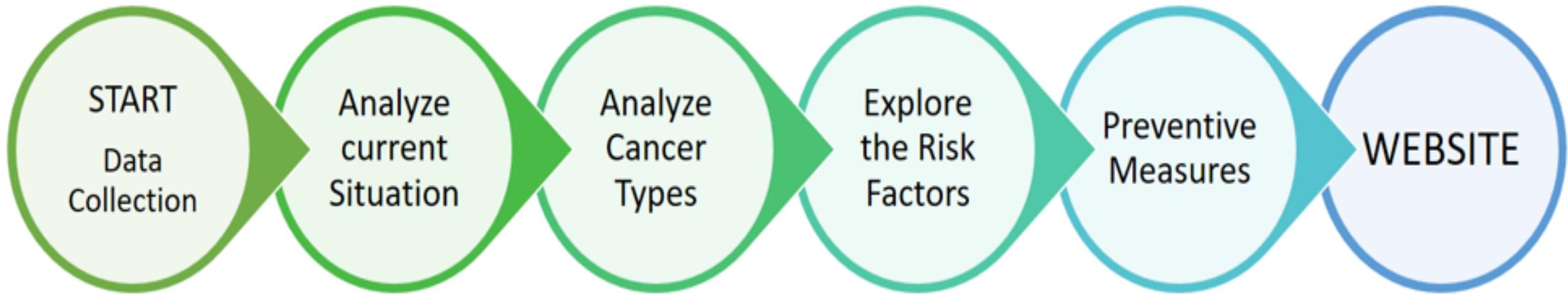
# How many cancers can be prevented?

Although there are some things we can't control about our cancer risk, decades of research have clearly shown that by living a **healthy life**, people can reduce the risk of developing the disease. But how many cancers in the UK are really caused by things we can change?

This diagram shows the results of new research funded by Cancer Research UK, which aims to show the number of cancer cases in the UK that could be prevented by known lifestyle and environmental factors, like being a **non-smoker**, keeping a **healthy weight**, drinking **less alcohol**, eating a healthy, **balanced diet**, and **avoiding** being exposed to certain infections or radiation.

The **thin lines** show the total number of cancers of each type from the latest UK incidence figures, and the **large bars** in the centre of each line show the proportion of these cases that could be prevented in **men** and **women**. Around the outside, you'll see the **lifestyle** and **environmental factors** that are linked to each cancer type. On the left is the contribution of each lifestyle factor to cancer overall.





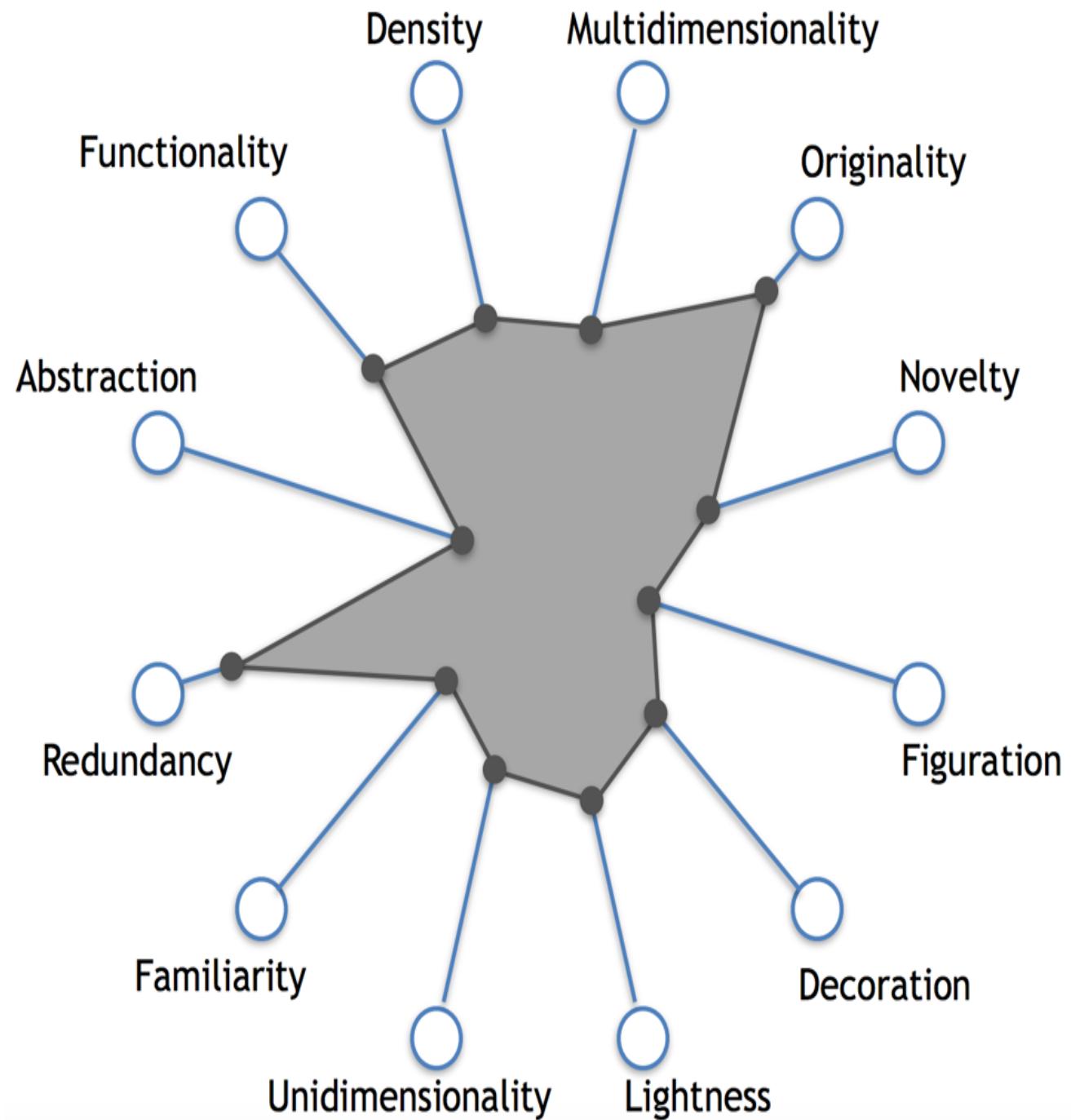
HTML5  
ggplot2 mLib  
Node.js  
Information D3.js  
GoogleCharts R  
CSS Visualization  
Python Technologies React  
JavaScript  
Bootstrap  
Plotly



World Health  
Organization



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™







Task Name	Start Date	End Date	Durat...	% Complete	Notes
- Project Conception & Initiation	10/04/17	10/11/17	6d		
Deciding the Project Topic	10/04/17	10/06/17	3d		
Preparing Presentation	10/07/17	10/11/17	4d		
- Data gathering	10/12/17	10/18/17	5d		
Data Understanding / Data Pre-processing	10/12/17	10/18/17	5d		
Design website Prototype	10/19/17	10/23/17	3d		
- Data Visualization	10/24/17	11/07/17	11d		
Develop Interactive Visualizations using d3.js/Plotly graphs	10/24/17	11/07/17	11d		
Integrating Visualizations with Node JS	11/08/17	11/16/17	7d		
Developing the Demo & Video	11/17/17	11/20/17	2d		
Paper	11/20/17	11/28/17	7d		
Project Closure : Presentation	11/29/17	11/29/17	1d		

Oct 1 Oct 8 Oct 15 Oct 22 Oct 29 Nov 5 Nov 12 Nov 19 Nov 26 Dec 3 Dec 10 Dec 17



### Project Conception & Initiation

Deciding the Project Topic

Preparing Presentation

### Data gathering

Data Understanding / Data Pre-processing

Design website Prototype

### Data Visualization

Develop Interactive Visualizations using d3.js/Plotly graphs

Integrating Visualizations with Node JS

Developing the Demo & Video

Paper

Project Closure : Presentation



KEEP  
CALM  
AND

THANK YOU FOR WATCHING

OUR PRESENTATION