



## The Advancements in the Fight Against Cancer

I have been asked to talk about advances in the treatment of cancer, what is new and how the future looks like for the management of this disease, and there would be a lot to talk given the very significant advances of the last decade or so.

Instead, and taking into account the title of this conference on “science and sustainability” I would like to discuss what I think is the pressing need in terms of what we have to do if we are going to succeed in dealing with this, and probably some of the the most important chronic degenerative diseases.

I want to do this using Greater Manchester as an example. GM is a region in the northwest of England, with a population of about 3 million people and a health budget of about £6 billion. Manchester also has the dubious distinction of having some of the most economically deprived areas in the UK.

The slides I am going to show you are of an introduction to a meeting that we recently organized at the Christie Hospital in Manchester one of the largest Cancer Hospitals in Europe.

The lesson is simple, the long-term treatment of this condition with increasingly sophisticated and expensive treatments and with increasingly complicated follow up procedures is illogical and un payable as a single strategy. We must look for another mix, more logical, and more conducive to a future society in which preserving health will take priority over treating disease.

It is calculated that in the UK one in every three people will develop cancer and this will increase to such an extent that by 2030 one in every two people will develop the disease at some point of their lives.

The prospects of cure in some forms of cancer and the prospect of living with cancer rather than dying from it are increasing all the time, but the budgets dedicated to this end are becoming phenomenal. We have to reduce the disease burden in order to be able to cope with this epidemic. And this is the developed world.

In the underdeveloped world, the mortality continues a pace and is there were the largest number of deaths related to cancer occur, and it could not be different since the investment per patient speaks for itself: while the developed world spends between \$180 and 460 US Dollars per cancer patient per year, South America, India and China, spend between \$ 0.54 and 7.92 US Dollars per patient per year.

I will come back to this towards the end of my presentation, but let’s look at the case of greater Manchester (slides).

Let me finish with a few general considerations.

The cost of treating cancer in the world was calculated to be in 2014 of approximately \$2.5 trillion, and rising rapidly. Only a small percentage of that, perhaps less than 5%, is dedicated to strategies related to prevention and early detection. The implementation of prevention, early detection, and treatment strategies could potentially save 2.4 million-3.7 million lives every year – the vast majority of them in low- and middle-income countries – yielding an economic benefit in excess of \$400 billion.

Moreover, it has been estimated that an investment of \$11.4 billion in a set of core prevention strategies in less wealthy regions of the world can lead to savings of up to \$100 billion in future cancer treatment costs. The measures with the highest potential for clinical and economic influence are those geared toward tobacco and obesity control, vaccines, early detection and treatment, palliative care, and health systems planning, with the creation of cancer registries.

### **Tobacco**

The cost of tobacco-related cancers worldwide exceeds \$200 billion a year. The average low- and middle-income country could, for a cost of approximately \$0.11 per capita, implement the most active control measures: education campaigns, higher excise taxes on tobacco, smoking bans in public places, and bans on smoking advertising, promotion, and sponsorship. The World Health Organization estimates that by increasing tobacco taxes by 50%, we could reduce the number of smokers by 49 million within the next 3 years and ultimately save 11 million lives, without a reduction of government revenues. By increasing tobacco excise taxes by 50% per pack, countries around the world could actually collect an extra \$101 billion in revenue.

### **Obesity, diet, and physical activity**

Obesity and other diet- and physical activity-related risk factors contribute to approximately 20% of cancer cases globally and will soon be the most common modifiable causes of the disease. The Organization for Economic Cooperation and Development predicted that the implementation of strategies to improve diets, increase physical activity, and tackle obesity in Europe would lead to gains of more than 3 million years of life free of cancer over 10 years.

Drawing on data from the United Kingdom, a recent report by McKinsey & Company, a business consultant firm, showed that a series of interventions to curb overweight and obesity – including public health campaigns, portion control, and limiting media exposure and price promotions – cost society less than the economic benefits they bring.