During the first year of medical school’s introductory lectures, the teacher would always take the opportunity to explain why their topic or “organ of interest” was important, if not the most important. For example, “without your skin, all the parts would fall out,” or “the small intestine spread out, would cover the globe.”

That need to show relevance continues today in a British Medical Journal article on Brexit, fruit, and vegetables. Yes, for all of the potential social, economic and political ills of Brexit, all scenarios lead to more expensive fruits and vegetables, reducing intake and (spoiler alert!) DEATH. Yes, death.

The researchers made use of previously published data, specifically how much more individuals would be willing to pay for fruits and vegetables (economically, the elasticity of prices), the amount of fruits and vegetables the Brits are eating, and how those amounts impact cardiac risk. A resulting paper represents a fun exercise in putting numbers into equations to generate results, most likely phony ones.

They considered increased tariffs and other costs for imports from both the EU and other countries in varying combinations. As you might suspect from a casual reading of the news, leaving Brexit without any plan may well result in those higher costs. It is a natural step from there to apply those increase costs to decrease purchases. While it varied with the fruit or vegetable being considered, bananas being a Brit favorite, prices rose about 15%, and consumption models decrease a similar percentage. No surprise there, it is after the favored mechanism for reducing intake of sugary beverages. (Raise the price, and they will go away.)
The real mathemagic

The changes wrought by the surge in food prices are felt to affect disease morbidity and mortality almost instantaneously, within a few months, not over the years. And the few studies alluded to in their reference to this more rapid food response, do show that food changes can result in declining morbidity and mortality within 1 to 3 years.

In the worst case scenario (Brexit without a plan), there would be 12,000 additional deaths; in the best case scenario only 4,200 would perish over the next ten-year period. In the sane world, there will be 0 additional deaths.

According to the authors, even if the Brits increased their fruit and vegetable production, there would be excess deaths. And to those of you concerned about gender inequality, men will continue to die at higher rates than the ladies.

Now, of course, the real mathemagic lies in the statistical analysis of their estimates complete with confidence limits and p-values. But those statistical features do not make the guesstimates correct, only consistent.

The calculations available to Parliament indicated that prices would rise for a typical family of four by $3.00 a week for groceries. For the lowest paid workers this represents roughly 1% of their weekly income.

The authors recognize limitations, in the application of their elasticities, and whether demand and supply will follow the scenarios they have created. They also acknowledge that the Brits may make use of new trading partners and deals, further increasing the uncertainty of their estimates. So for all the fuss and bother, for all the attempts to demonstrate relevance, we are left with the usual take-home thoughts:

1) As your mother told you, eat your fruits and vegetables, they are good for you.

2) The significant changes that Brexit will bring about will reverberate in ways that we cannot anticipate or faithfully predict. But we can be certain that 12,000 deaths won’t be one of the consequences.