

# Validating PMI's Population Health Impact Model\*

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## OBJECTIVE

PMI is developing products with the potential to reduce the risk of diseases associated with smoking cigarettes.

In order to quantify the effect that marketing these products has on the health of the population as a whole, PMI has developed a **Population Health Impact Model (PHIM)**.

The model estimates the impact on smoking-attributable mortality, by calculating the smoking-attributable deaths in both the scenario with and without the introduction of **Reduced Risk Products (RRPs)**.

### What does the model simulate?

US smoking distribution and smoking-attributable deaths  
↓  
20-year period

### Population

Age and sex -specific smoking distribution

### Data used for simulation

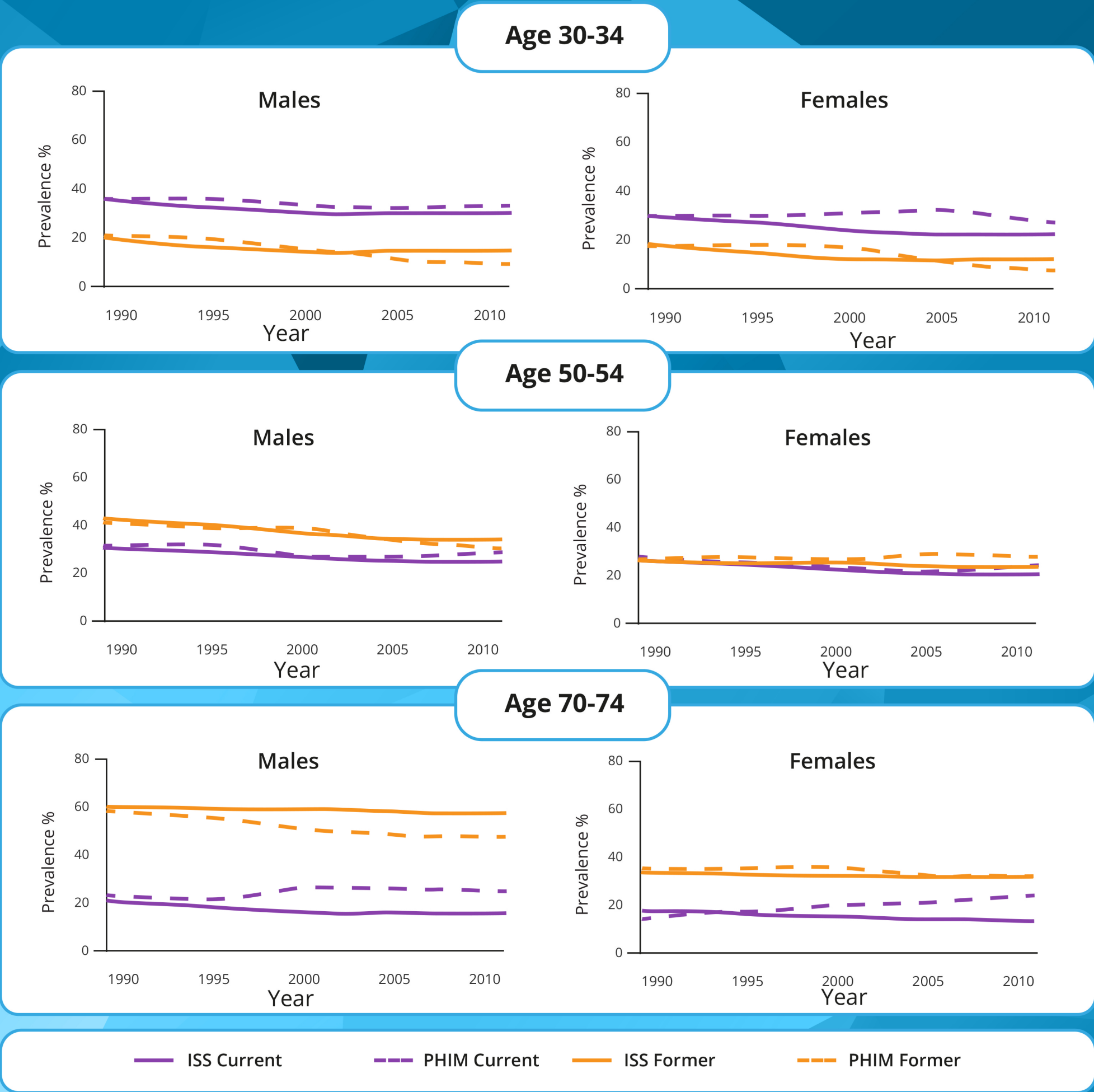
UN-US population estimates  
WHO-mortality estimates  
National Health Interview Survey (distribution of quit times)  
PN Lee meta-analyses (disease-specific relative risk estimates)

### Data used to assess results

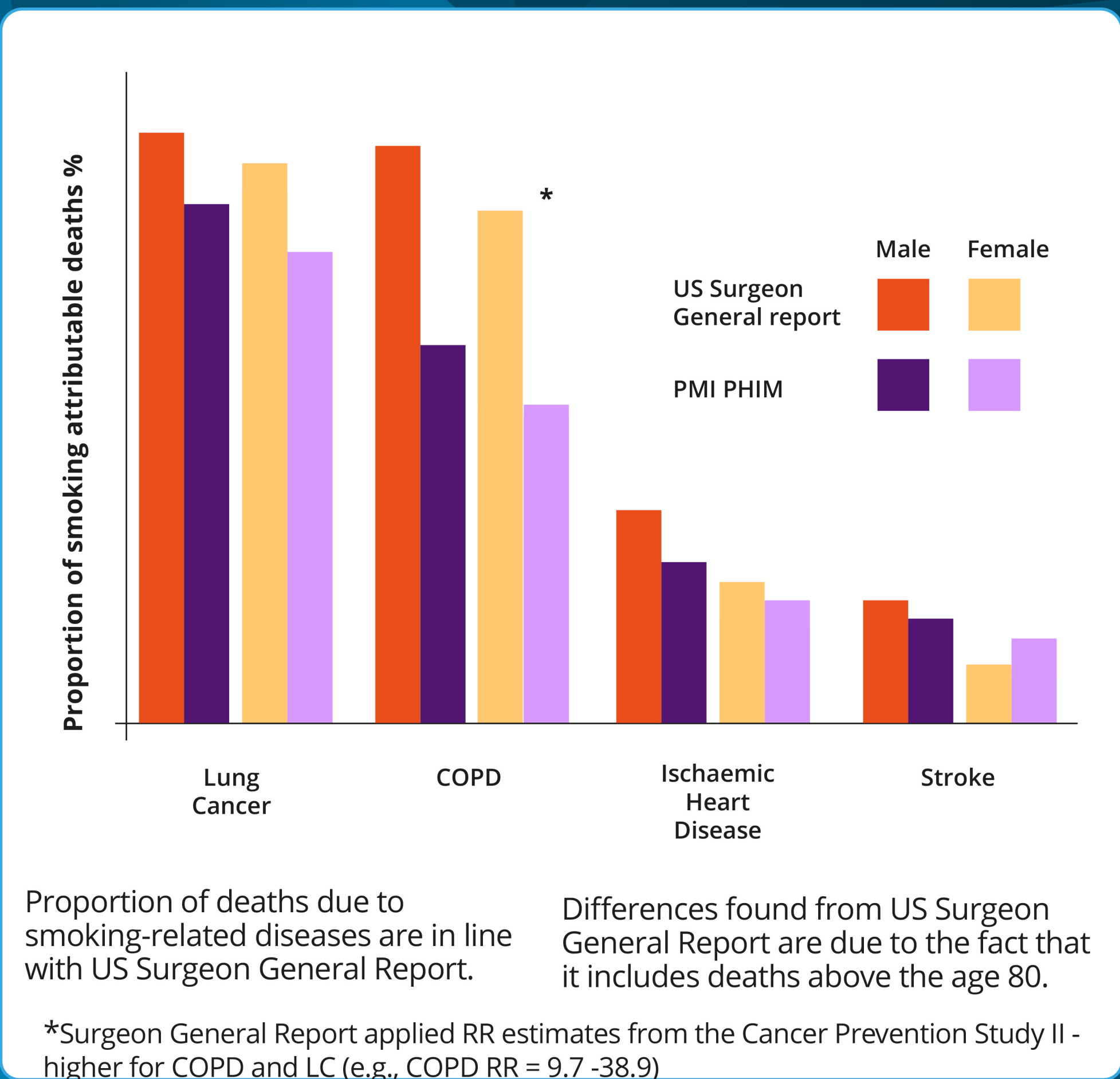
International Smoking Statistics (ISS)\* (smoking prevalence estimates)  
2014 US Surgeon General Report \* (Mortality Estimates)

## Assessing the performance of the Population Health Impact Model

### Comparison of Prevalence of current and former smoking as Predicted by PHI Model & Reported by Intl. Smoking Statistics



### Comparison of Simulated 2009 Smoking-Attributable Mortalities with 2014 US Surgeon General Report



## CONCLUSIONS

1

PHIM estimates are consistent with published data on smoking prevalence and smoking-attributable deaths.

2

PHIM can be applied to a variety of tobacco use behaviors & risks associated with different patterns of use.

3

PHIM can be used to evaluate population health impact associated with introduction of RRP's into a market.

\*For more detailed information please refer to original poster "Establishing a Valid Model to Estimate the Impact of Introducing a Reduced Risk Product on the Population as a Whole"