



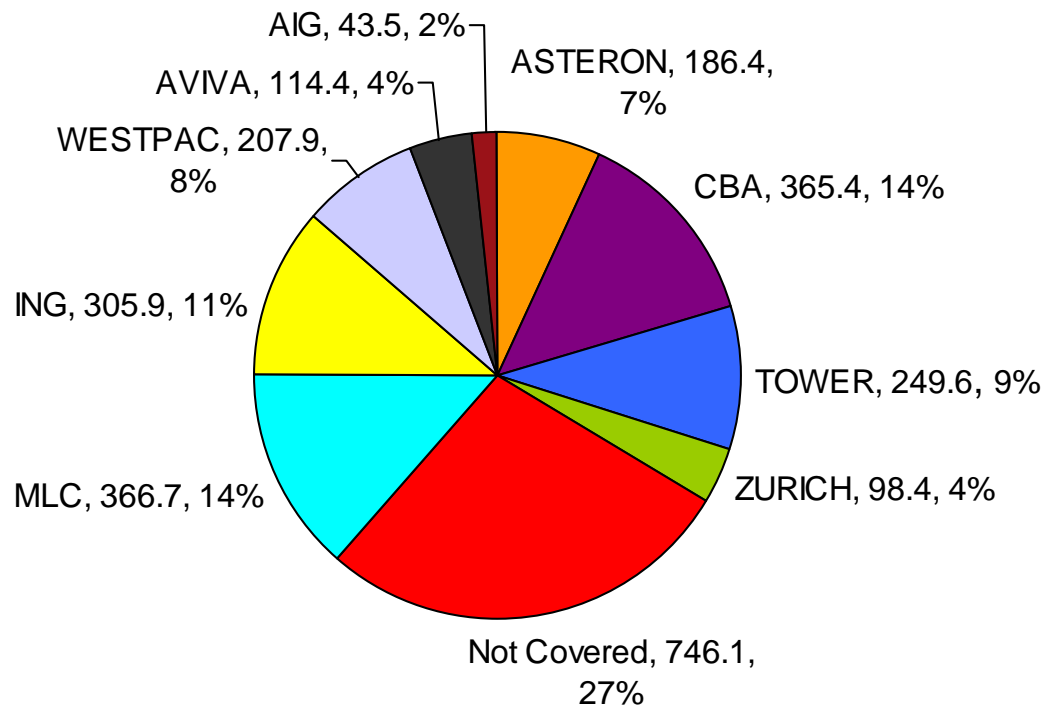
# Industry Critical Illness Survey

**Eddie McEllin**  
Senior Actuary  
Tel. +61 2 8236 6206  
[eddie.mcellin@genre.com](mailto:eddie.mcellin@genre.com)

# About the Survey

Survey covered 9 Australian insurers of Trauma insurance

Annual Premium \$m, %



Major carriers not covered: AMP 11%, AXA 8%

Source: "Media Release Life Insurance Risk Products Industry Results - June 2006"

# Scope of the experience investigation

## 5 – Year Observation Period



1) Critical Illness *in-force at any time* during 2001-2005

2) Critical Illness claims *diagnosed* during 2001-2005

- Claims data includes 3902 claims incurred and \$537million in claims paid.
- Exposure data includes 1.57million life years and 238 billion is sum assured.
- Incidence rates obtained from claim count divided by central exposed to risk at age next birthday. Includes both accelerated and stand alone trauma claims, but excludes death claims.
- Graduated rates obtained by from male and female, 2+ duration, raw incidence rates.

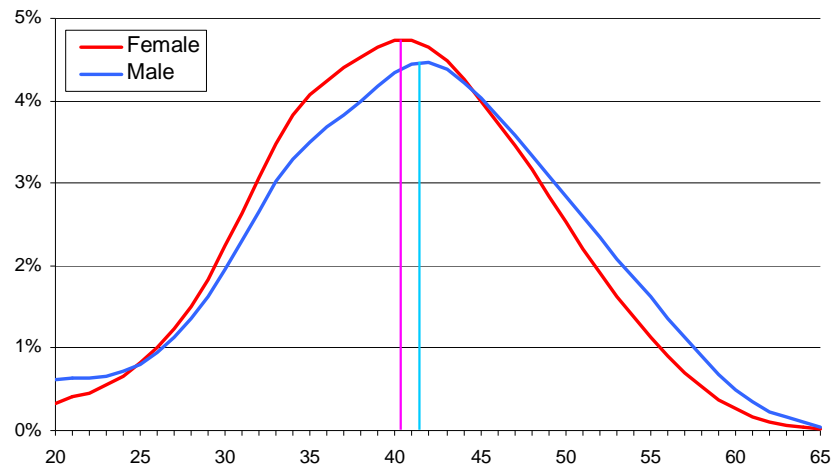
# Distribution of Exposure by Age

	Female	Male	All
Average Age	<b>40.4</b>	<b>41.4</b>	<b>40.9</b>
20-29	9%	9%	9%
30-39	37%	32%	35%
40-49	40%	40%	40%
50-59	13%	17%	16%
>60	1%	1%	1%

### Gender Mix

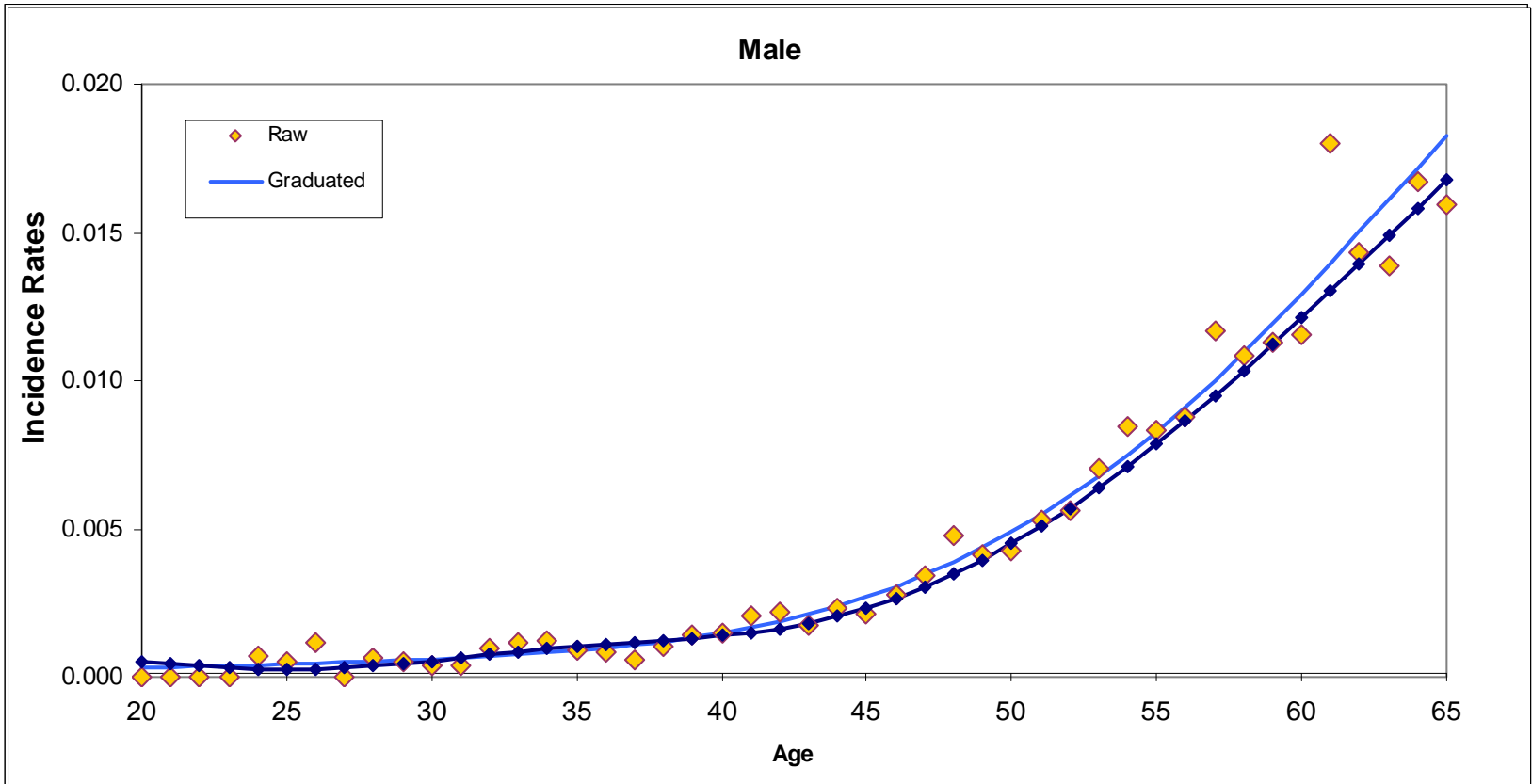
Female = 46%

Male = 54%



# Trauma Incidence Rates (Male)

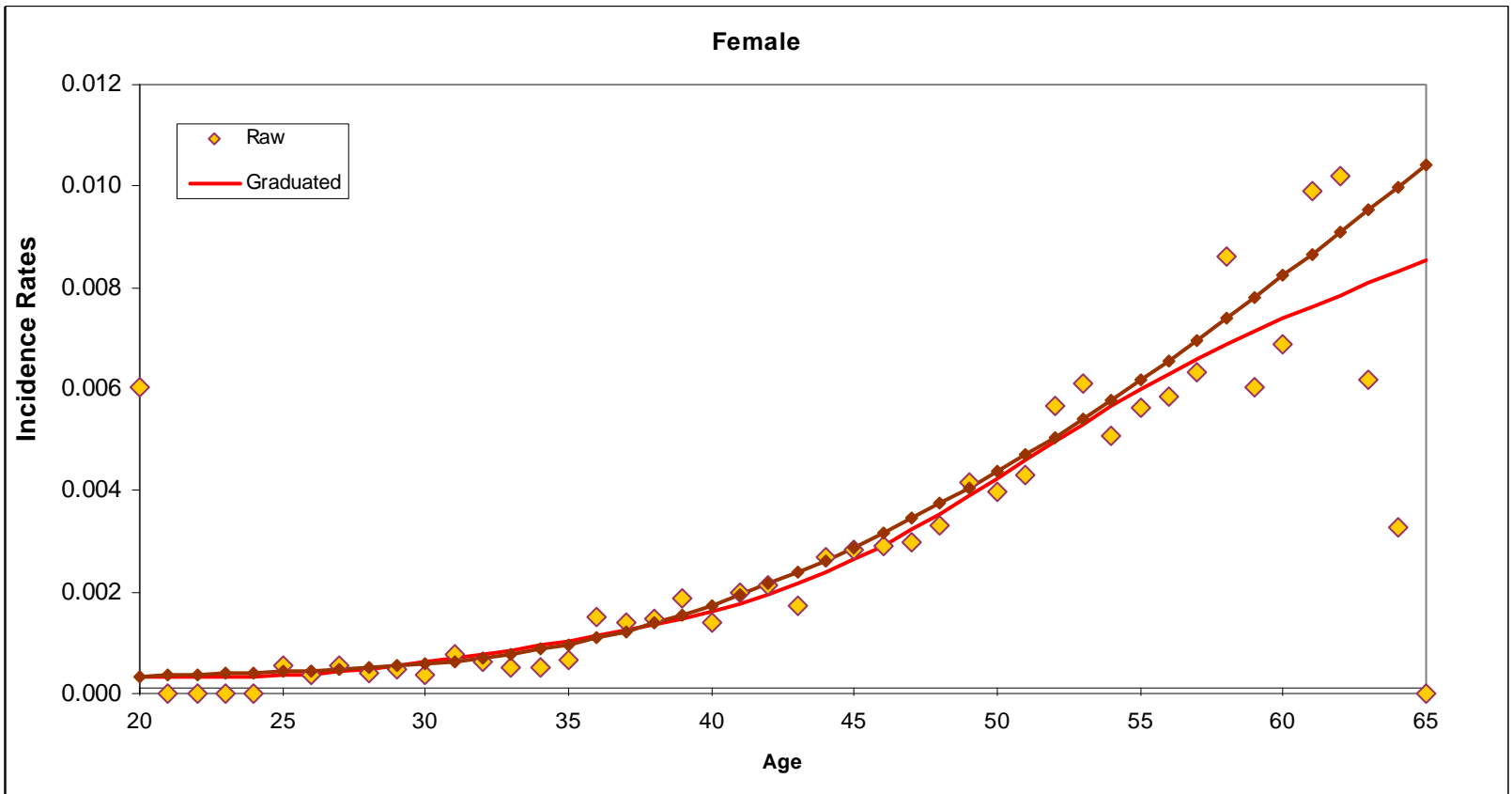
Trauma only (2+ Duration, Accelerated and Stand Alone)



Total Male Data: 1831 claims, 565,143 life years

# Trauma Incidence Rates (Female)

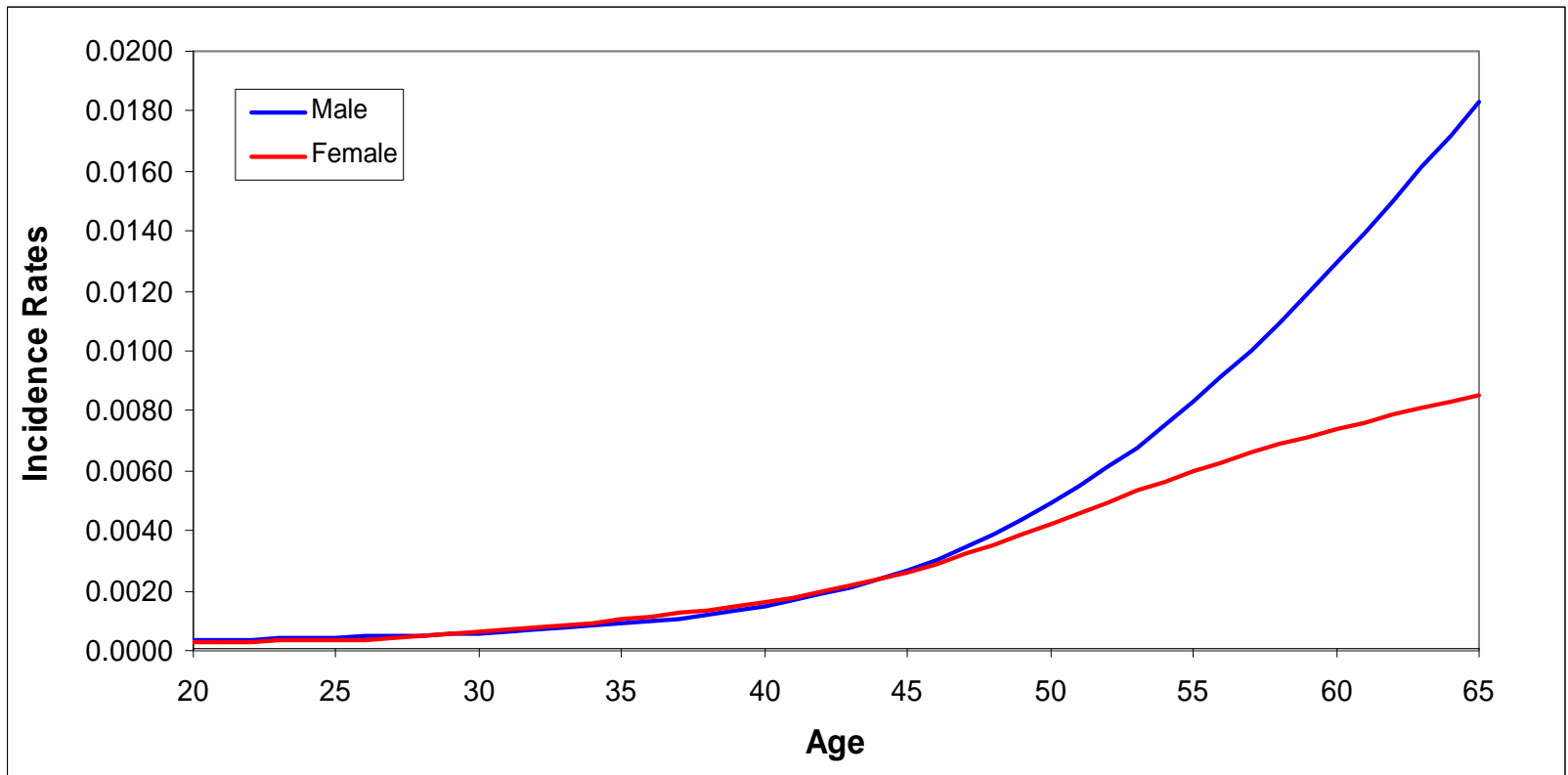
Trauma only (2+ Duration, Accelerated and Stand Alone)



Total Female Data: 1200 claims, 498,364 life years

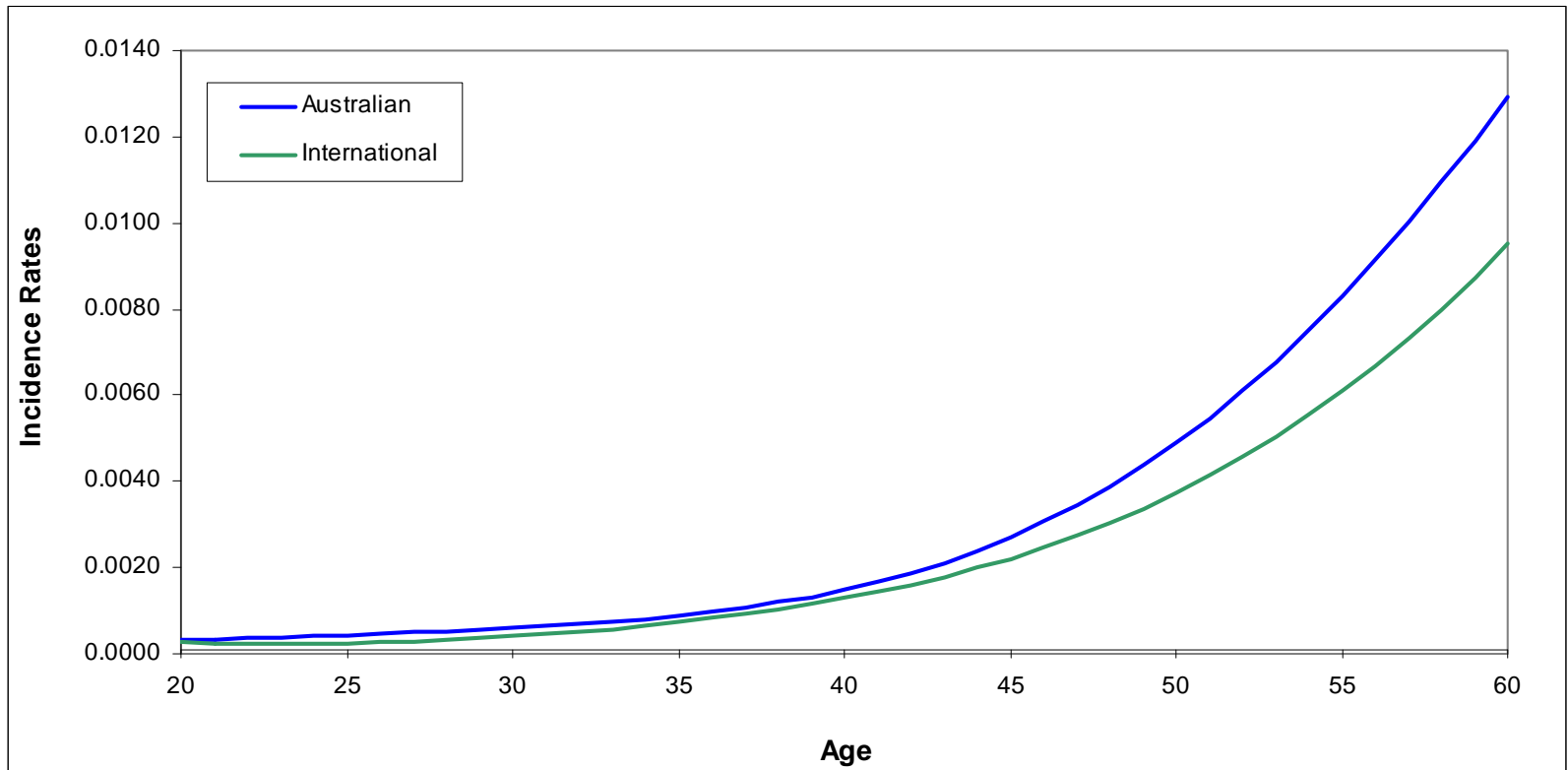
# Trauma Incidence Rates

## Male / Female Comparison



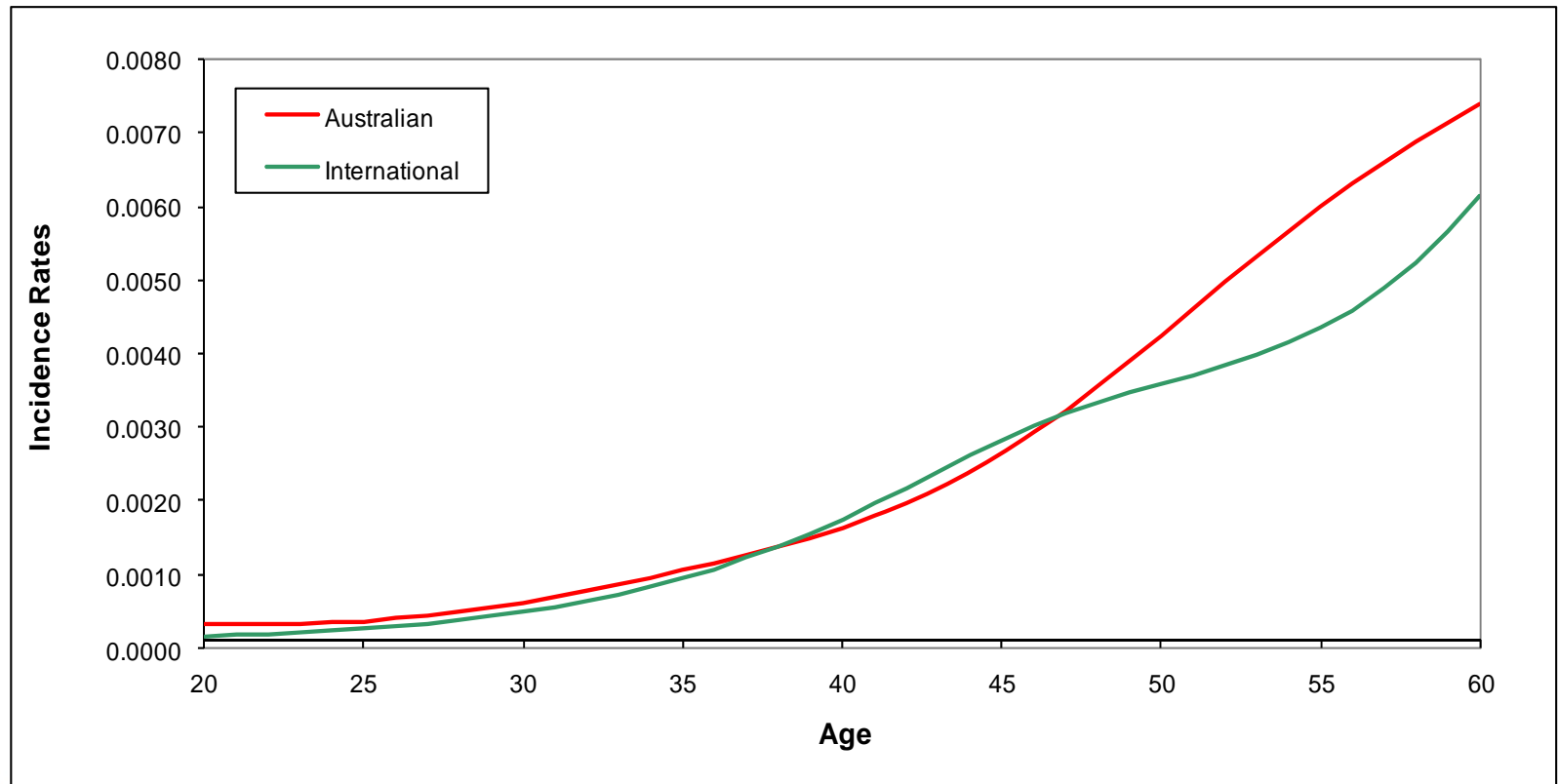
# Trauma Incidence Rates (Male)

Comparison with International Trauma Survey 2000-2004  
International includes: Hong Kong, Malaysia, and Singapore

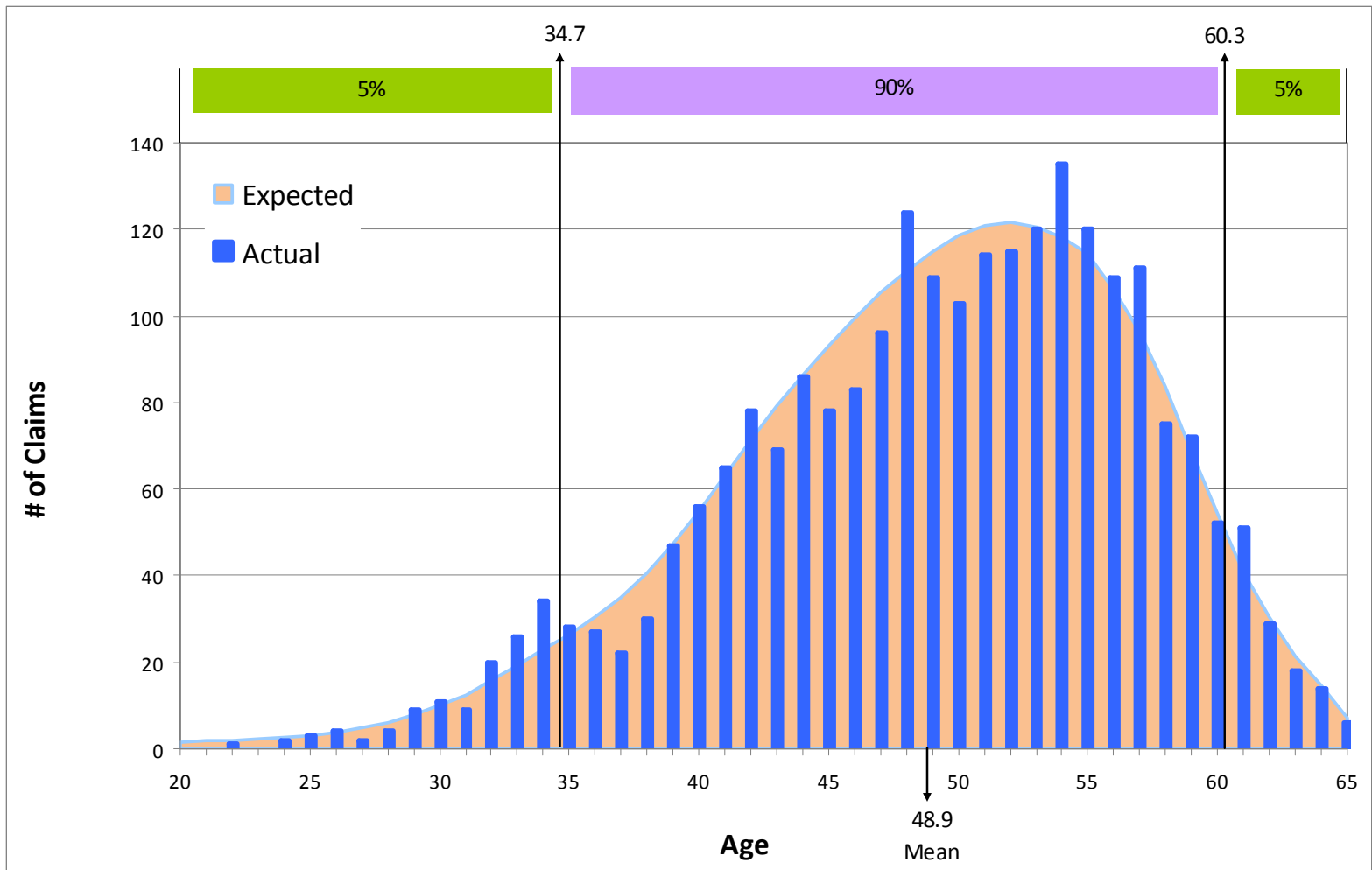


# Trauma Incidence Rates (Female)

Comparison with International Trauma Survey 2000-2004  
International includes: Hong Kong, Malaysia, and Singapore

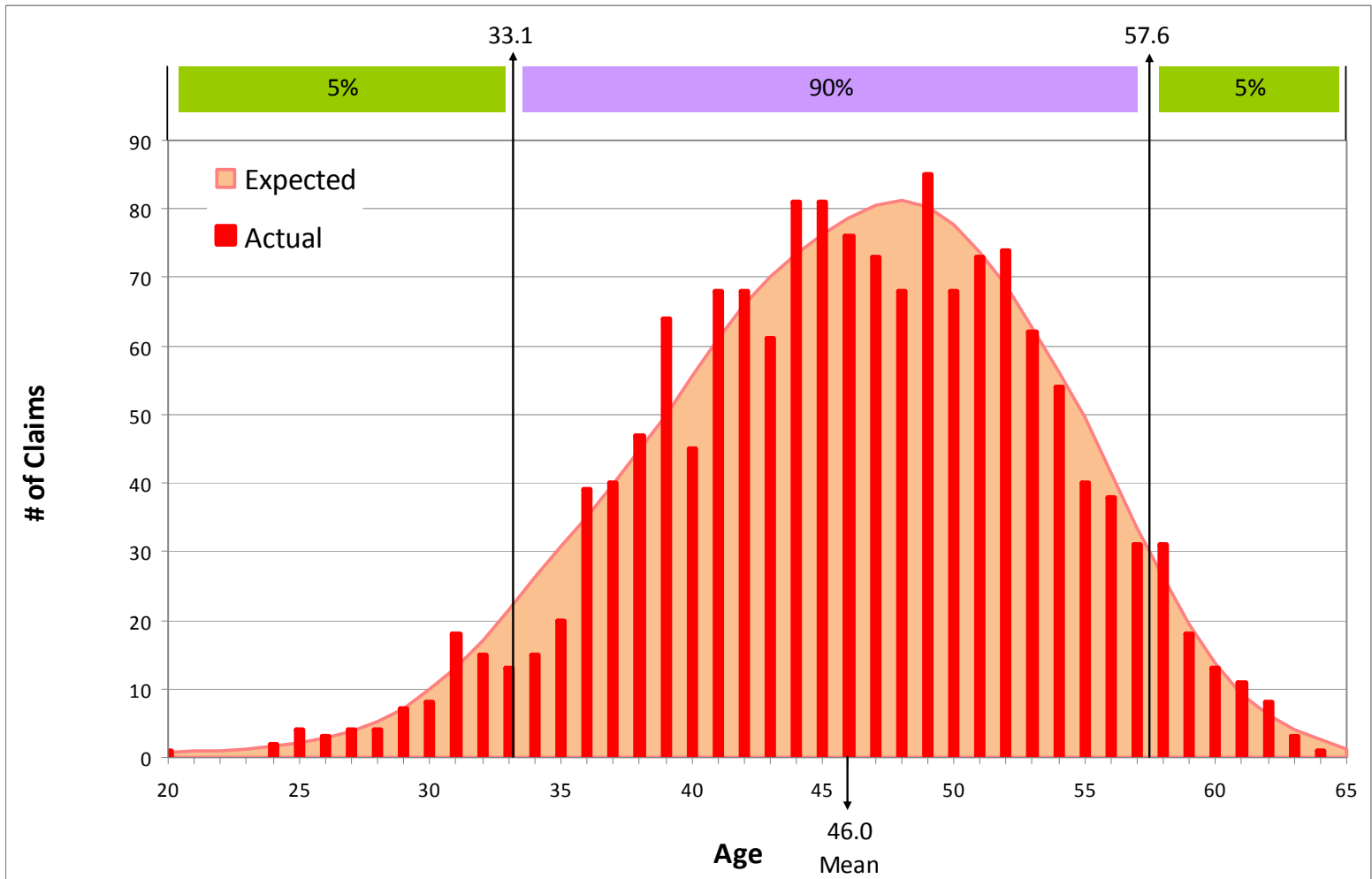


# Distribution of Claims by Age (Male)



90% of the claims are incurred between ages 34.7 and 60.3

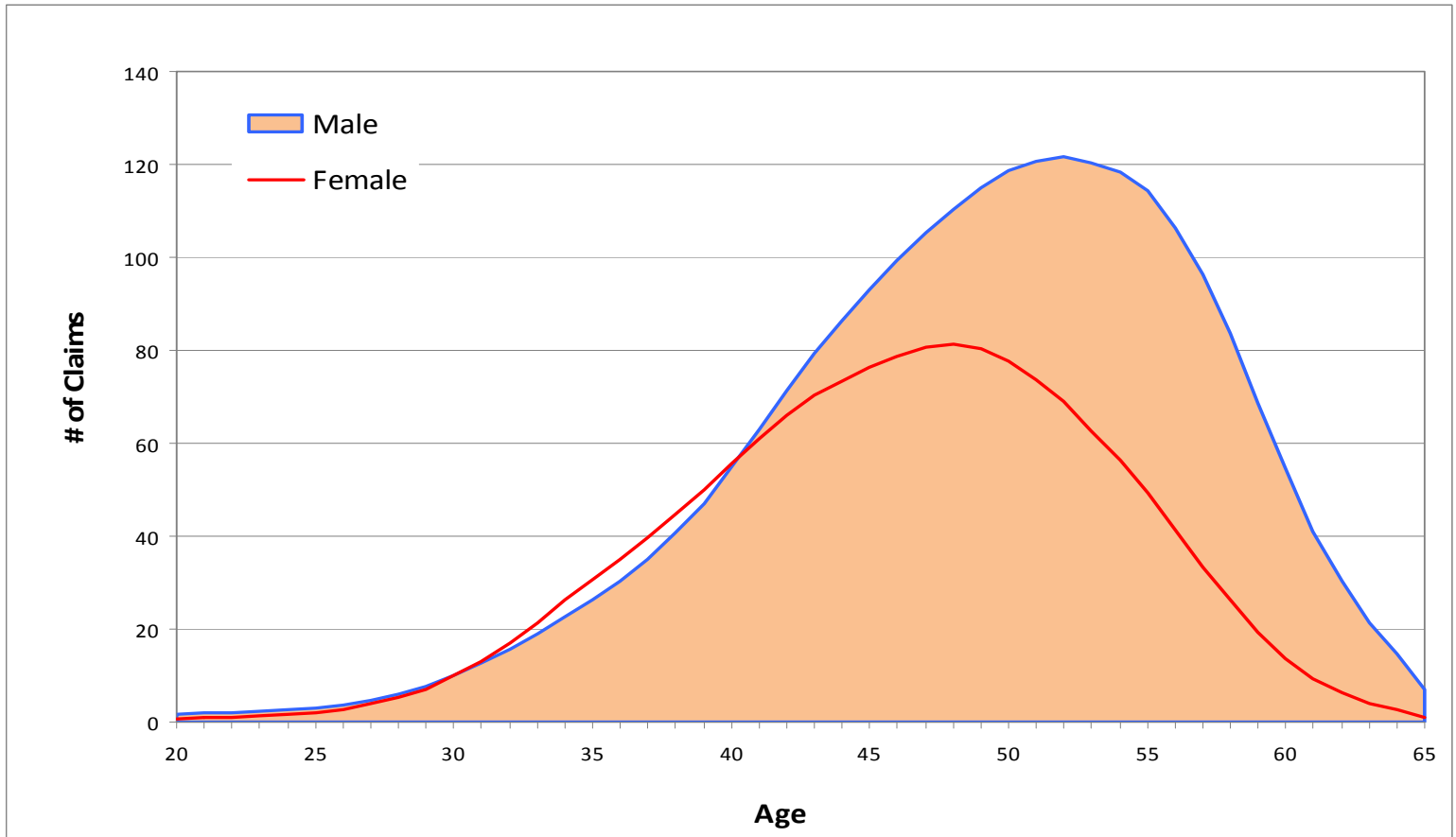
# Distribution of Claims by Age (Female)



90% of the claims are incurred between ages 33.1 and 57.6

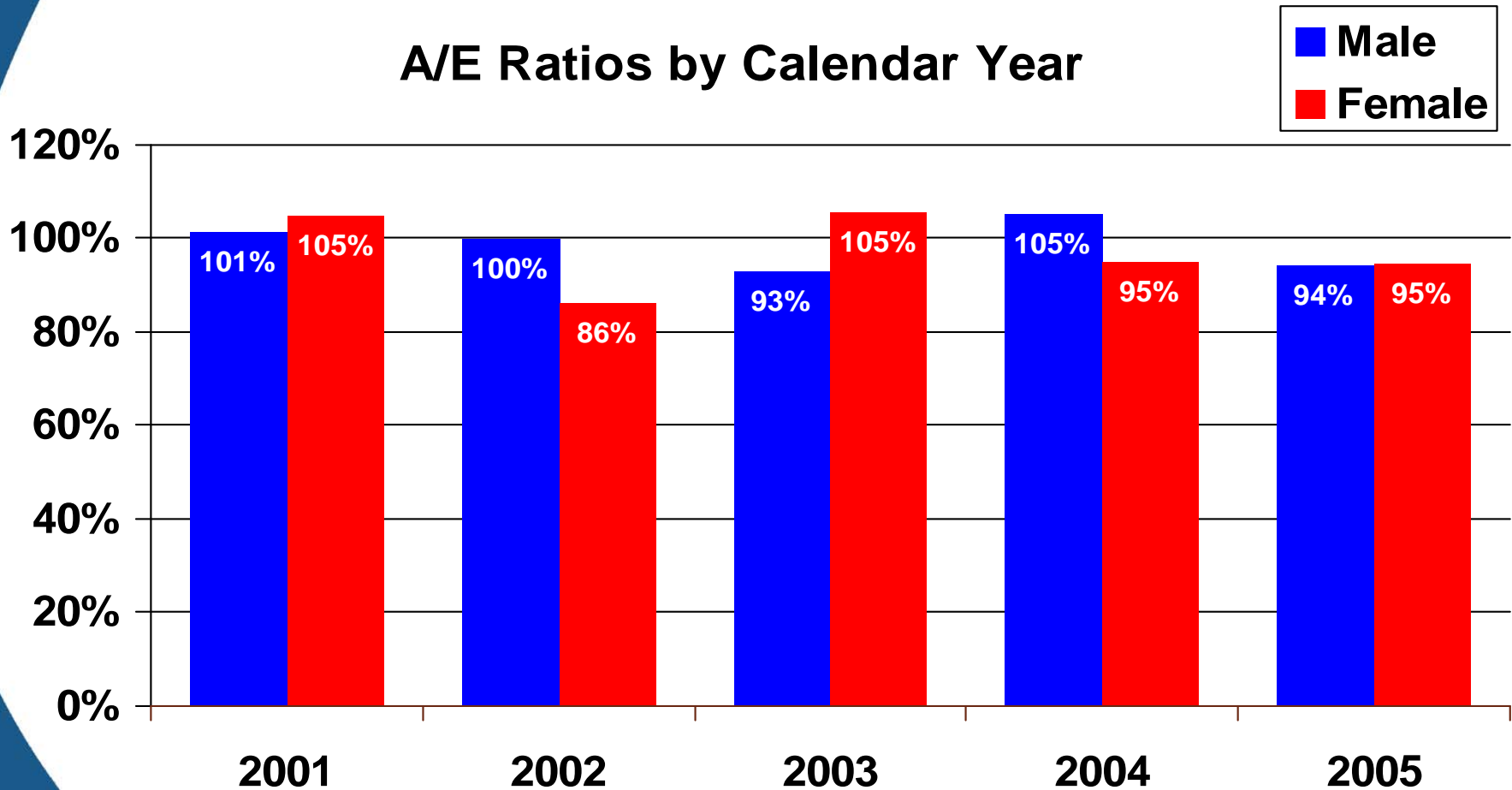
# Distribution of Claims

## Male / Female Comparison



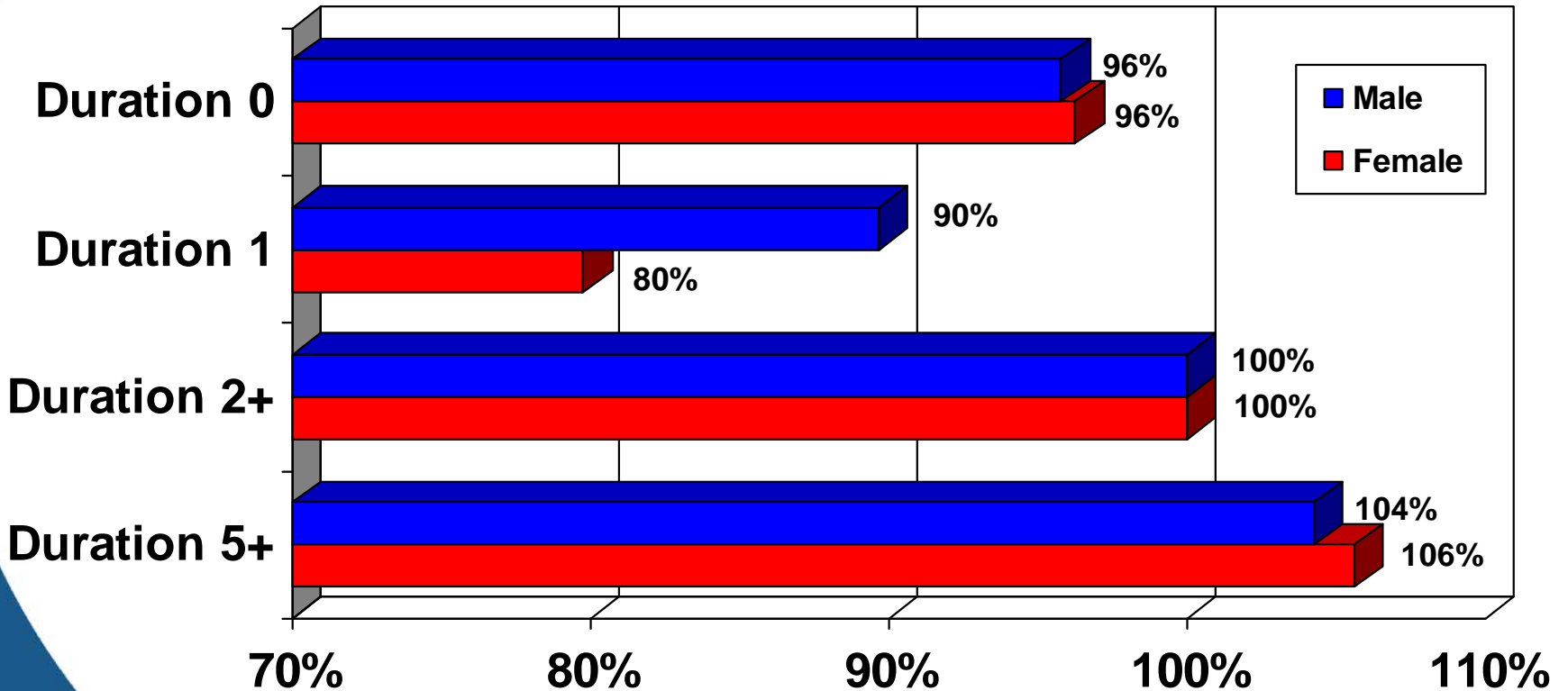
# Comparison by Calendar Year

## A/E Ratios by Calendar Year



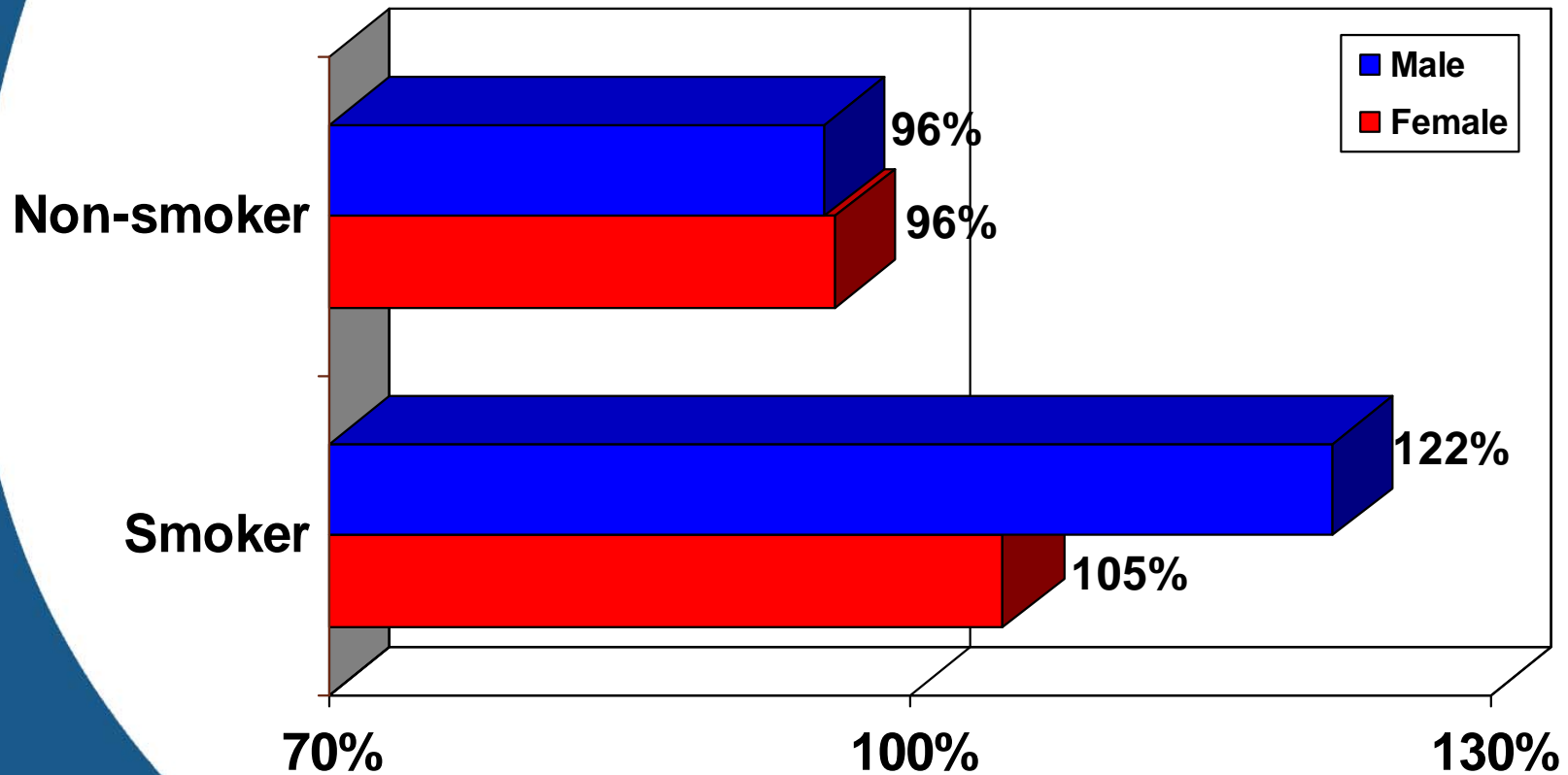
# Comparison by Duration

## A/E Ratios by Selection Period



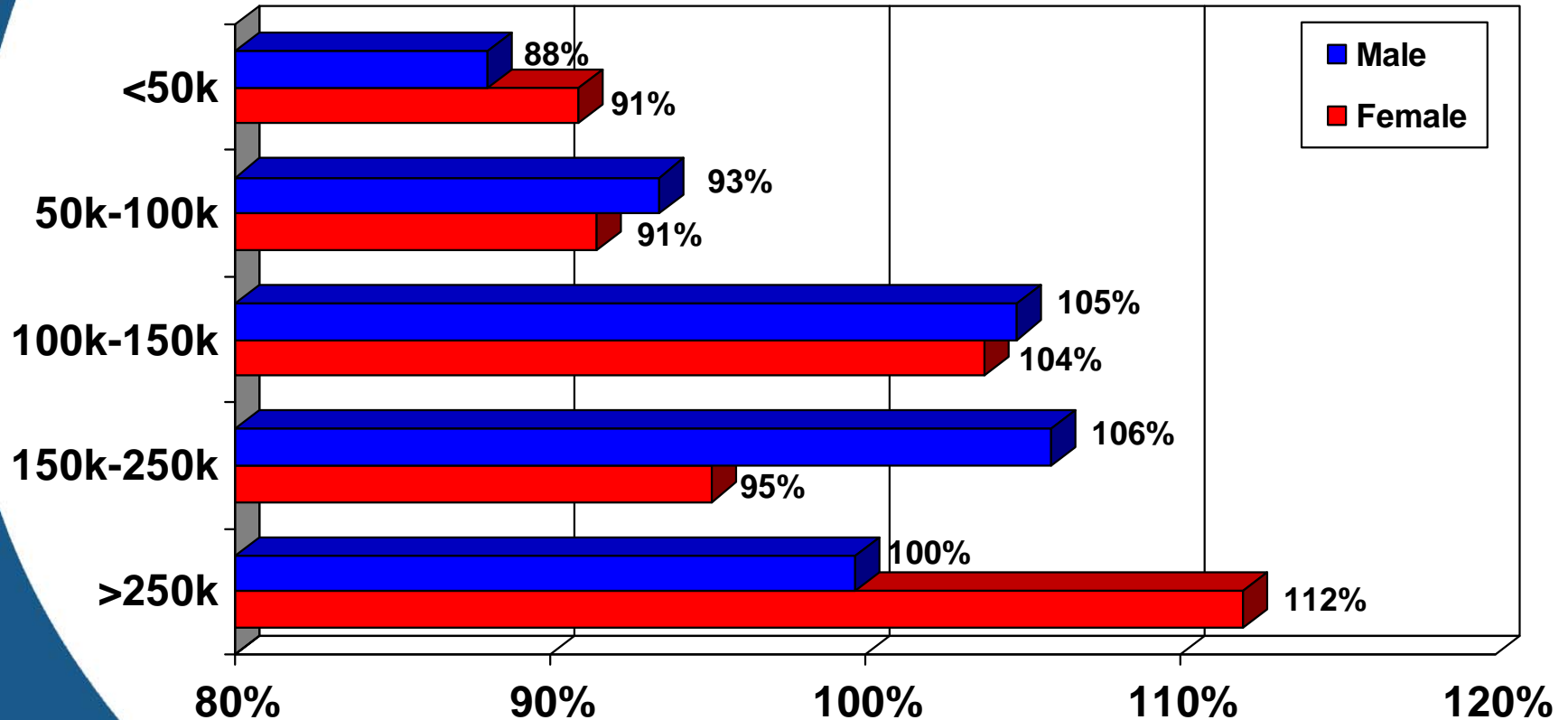
# Comparison by Smoking Status

## A/E Ratios by Smoking Status

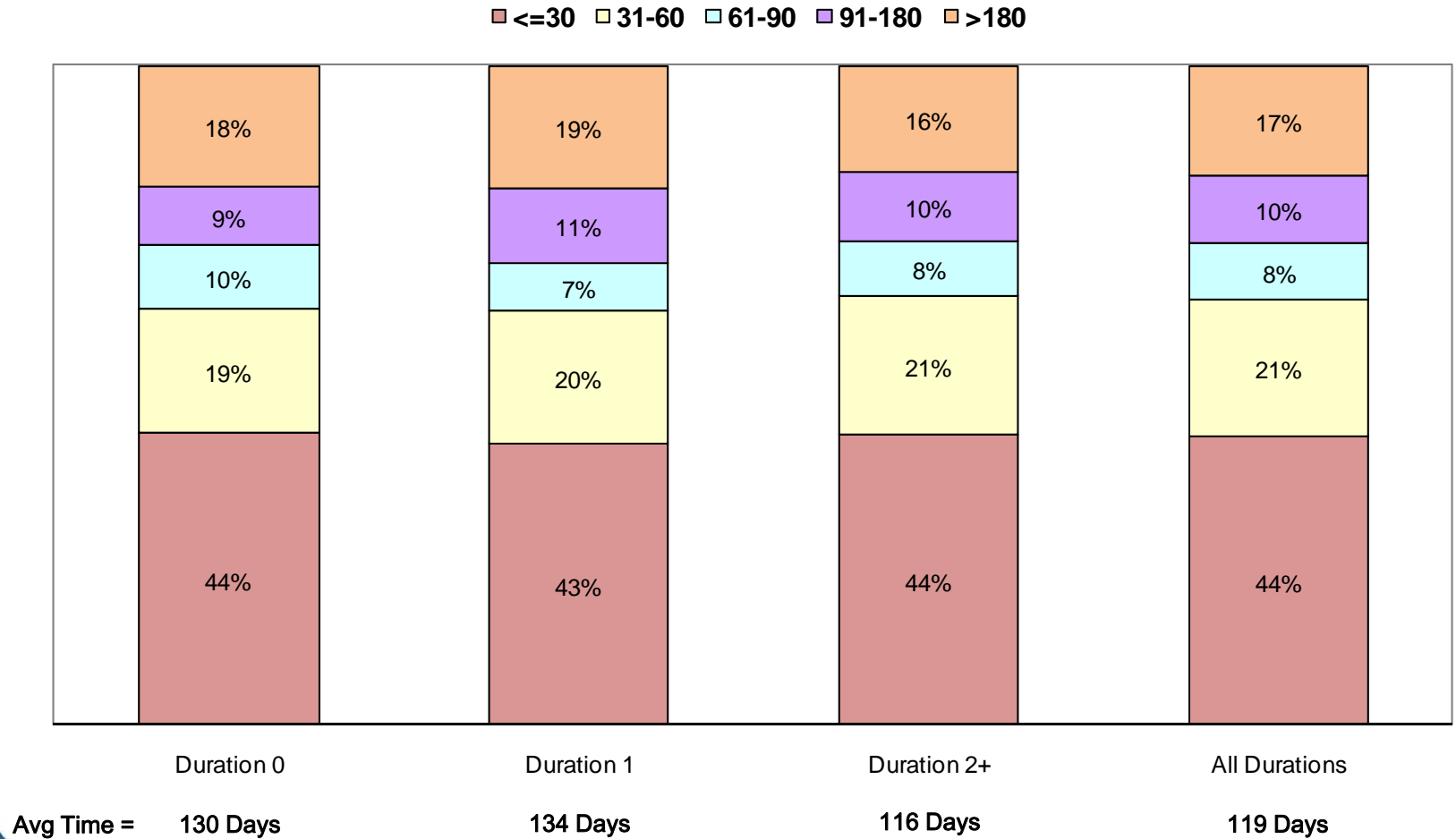


# Comparison by Sum Assured

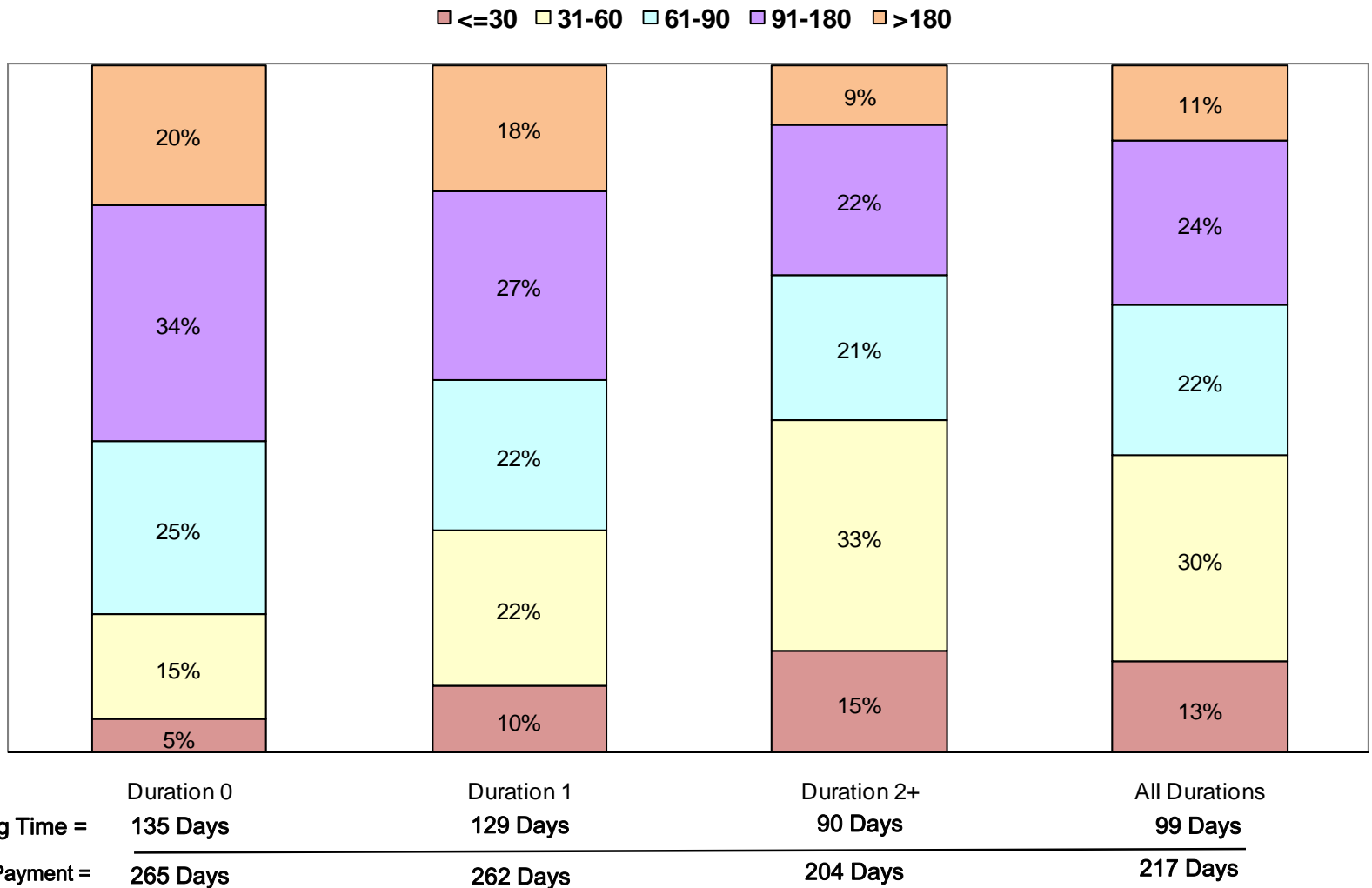
## A/E Ratios by Sum Assured Amount



# Time from Event Date to Notification

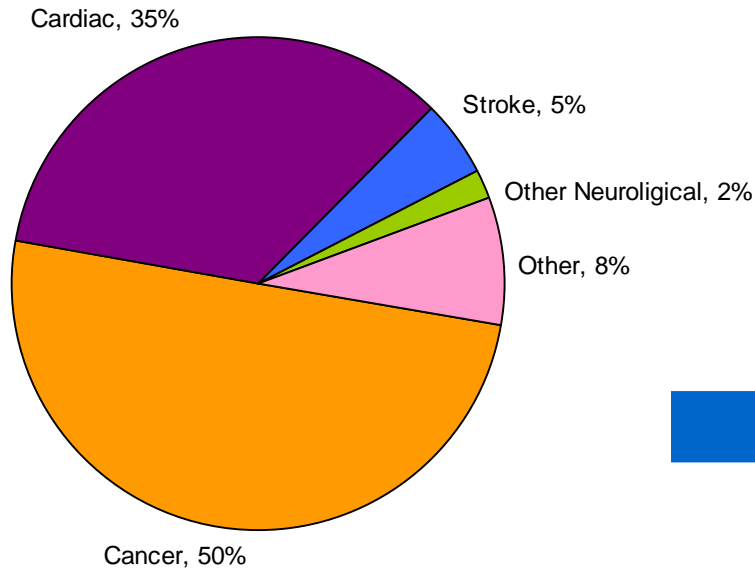


# Time from Notification to Benefit Payment



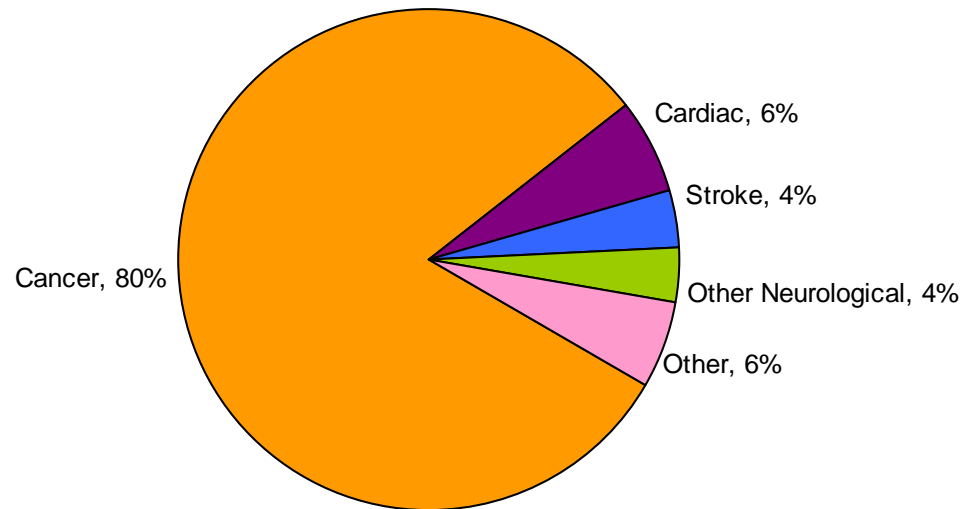
# Cause of Claim by Site

## Males (% Total)



Cancer, Cardiac, and Stroke account for 90% of male claims

## Females (% Total)

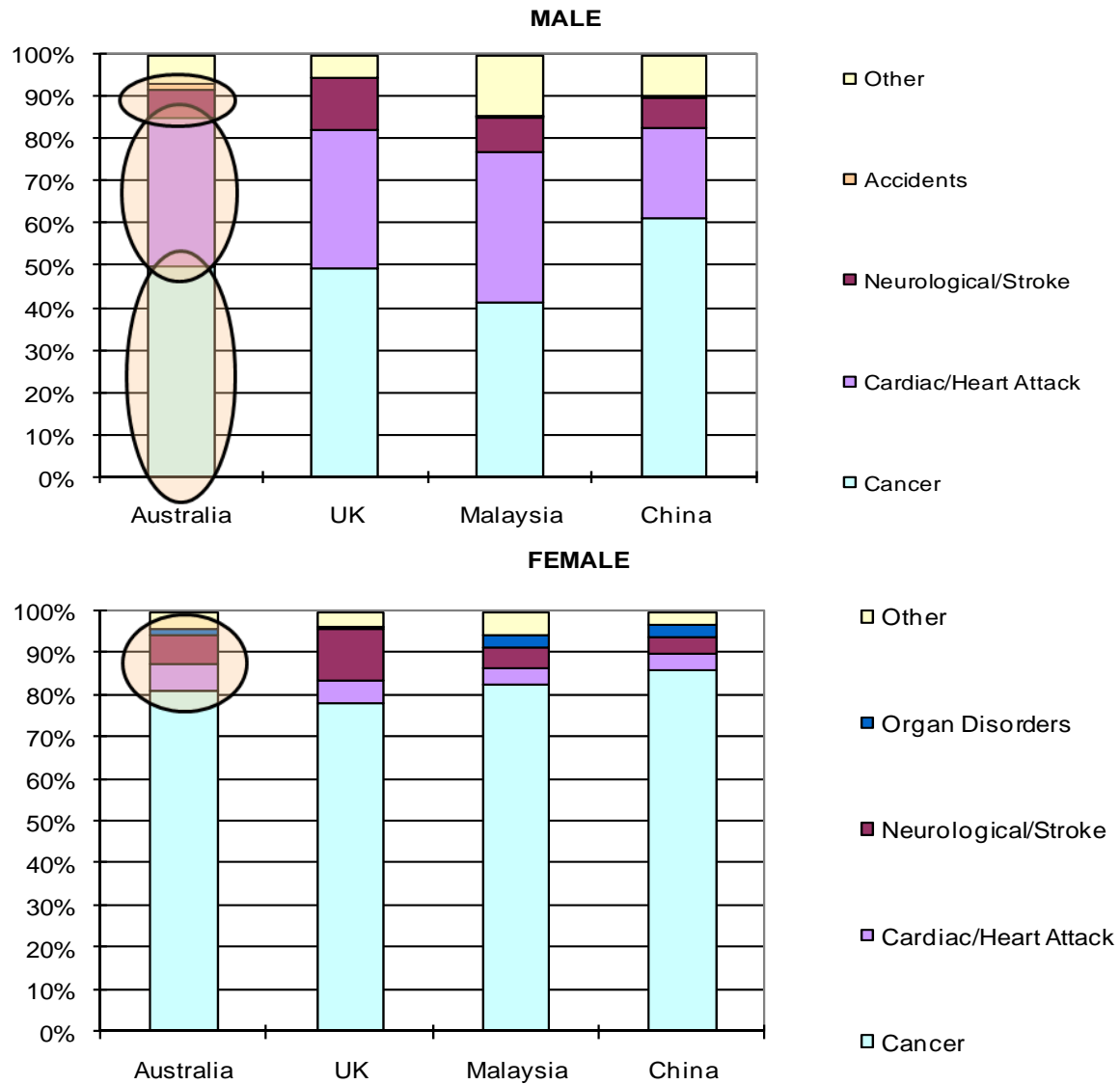


Cancer accounts for 80% of female claims

# Cause of Claim by Age and Site

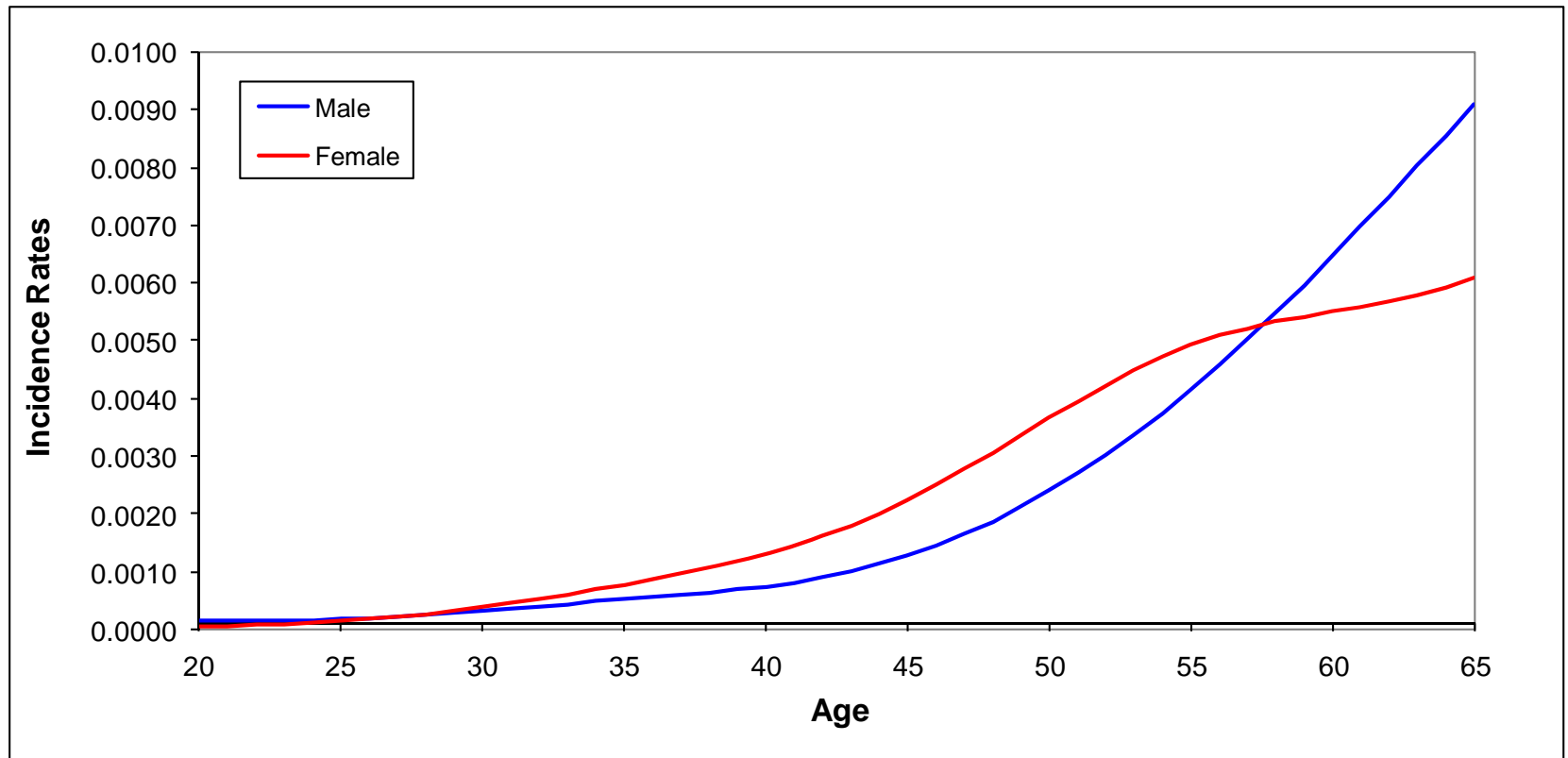
Gender	Female					Male				
	20-29	30-39	40-49	50-59	60+	20-29	30-39	40-49	50-59	60+
Number of Claims	25	279	706	489	36	25	254	844	1074	170
Cancer	52.0%	76.0%	84.0%	83.0%	58.3%	52.0%	58.7%	47.6%	49.7%	50.0%
Cardiac/Heart Attack	0.0%	5.4%	5.2%	7.2%	19.4%	12.0%	18.9%	37.2%	36.8%	38.2%
Stroke	12.0%	4.3%	3.4%	2.7%	11.1%	12.0%	6.7%	4.0%	5.2%	5.3%
Neurological (MS)	16.0%	6.5%	2.1%	2.9%	11.1%	0.0%	3.5%	1.4%	2.2%	0.6%
Organ Disorders	4.0%	2.5%	0.7%	1.2%	0.0%	4.0%	0.8%	1.2%	0.5%	0.6%
Head Trauma/Coma	4.0%	0.7%	0.7%	0.8%	0.0%	4.0%	2.8%	1.3%	0.7%	0.6%
Accidents	4.0%	0.4%	0.4%	0.0%	0.0%	12.0%	2.4%	2.1%	0.5%	0.6%
Loss of Abilities	0.0%	0.0%	0.6%	0.2%	0.0%	0.0%	0.8%	1.1%	0.5%	1.2%
Paralysis	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	2.0%	0.1%	0.2%	0.0%
Blood Disorders	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%
Transplants	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
Other	8.0%	4.3%	2.8%	1.8%	0.0%	4.0%	3.1%	3.6%	3.7%	2.9%

# Cause of Claim International Comparison



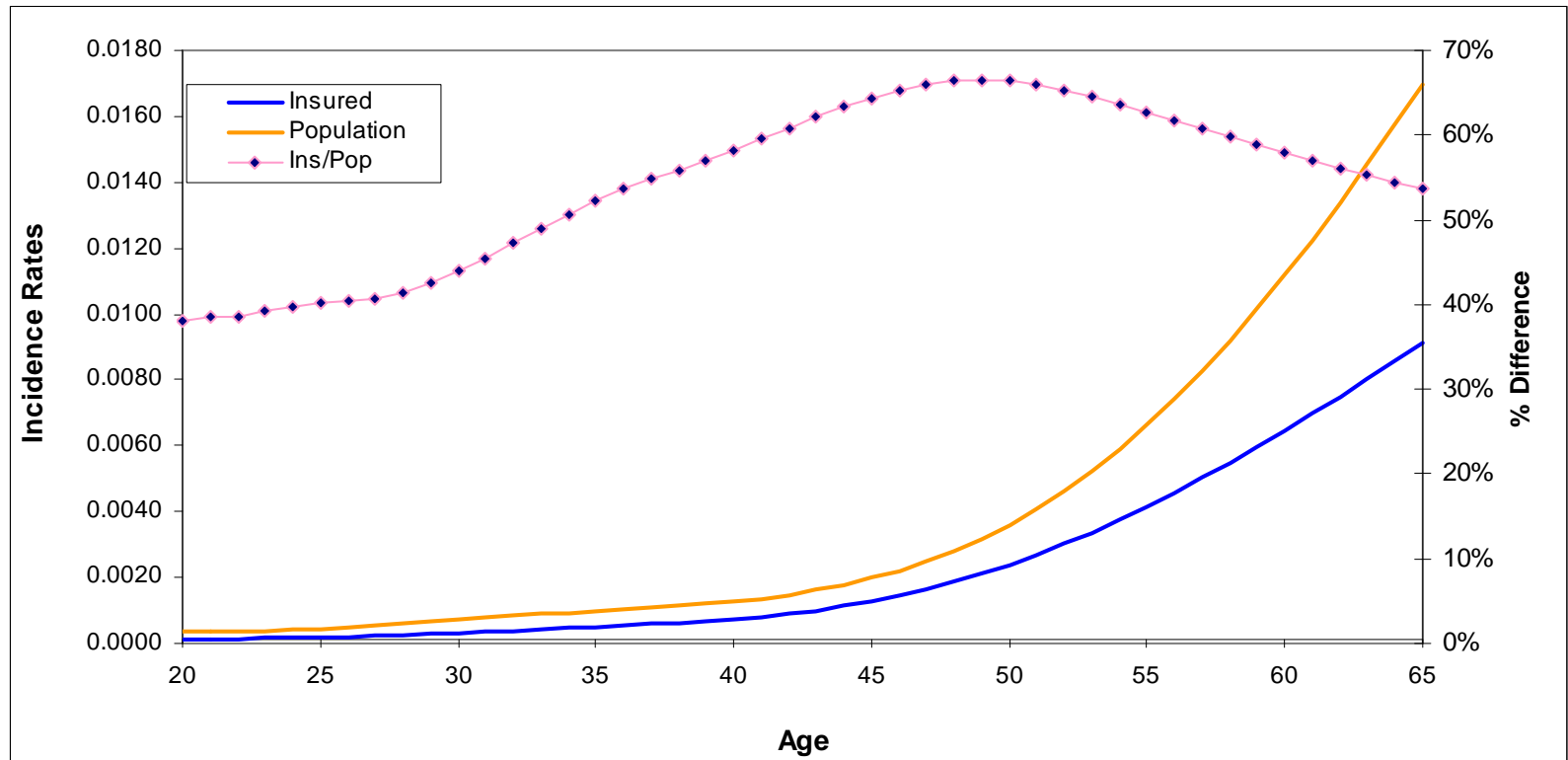
# Cancer Incidence Rates

## Male / Female Comparison



# Cancer Incidence Rates (Male)

## Comparison with Population Incidence Rates

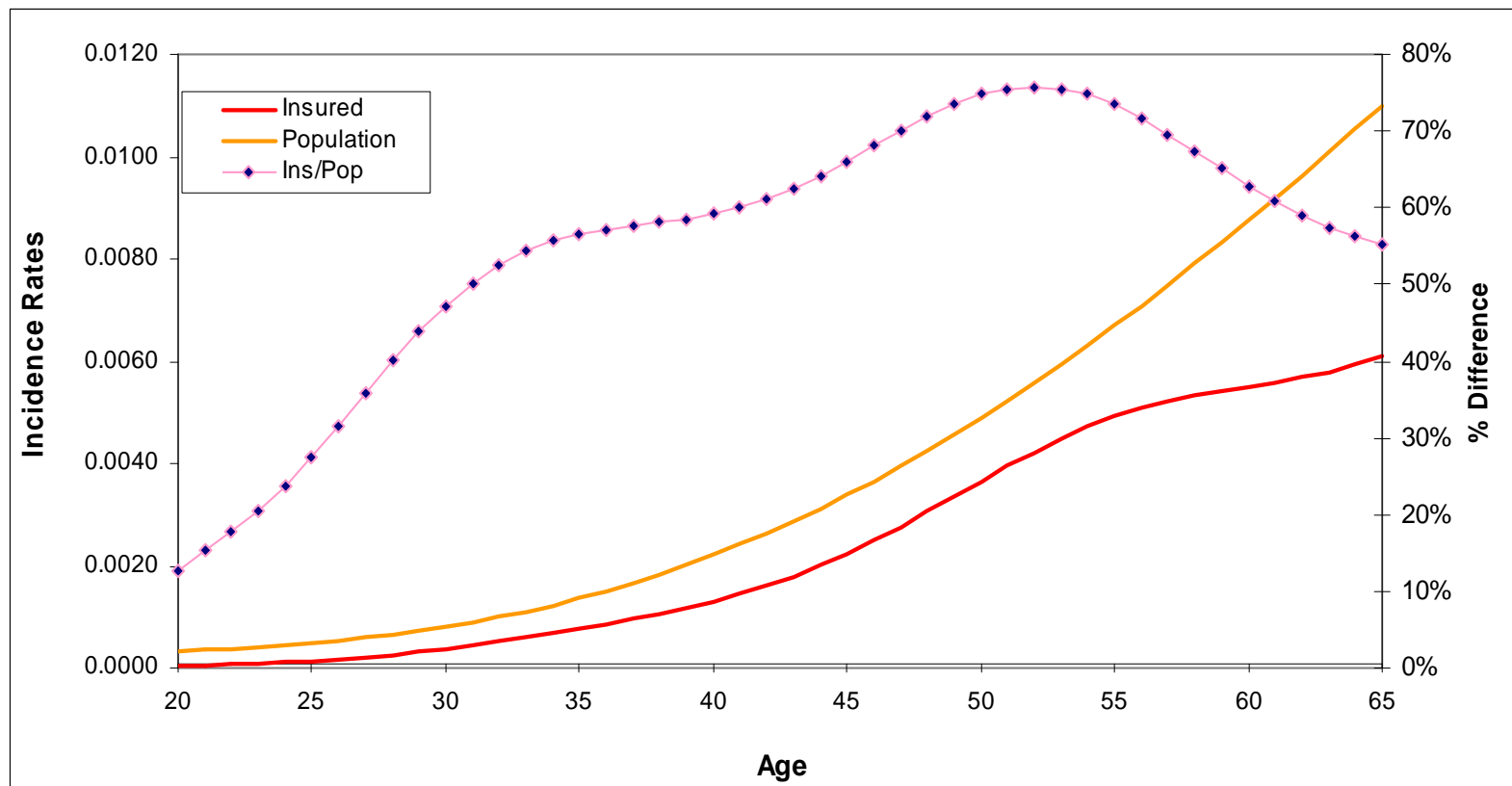


Population cancer rates graduated from 2001 to 2004 raw incidence data.

Source: Australian Institute of Health and Welfare

# Cancer Incidence Rates (Female)

## Comparison with Population Incidence Rates

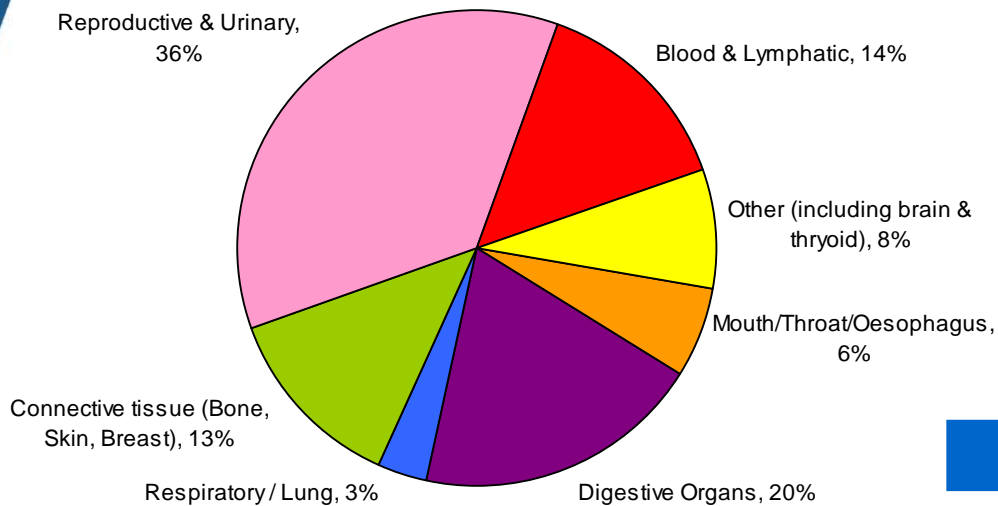


Population cancer rates graduated from 2001 to 2004 raw incidence data.

Source: Australian Institute of Health and Welfare

# Cancer Claims by Site

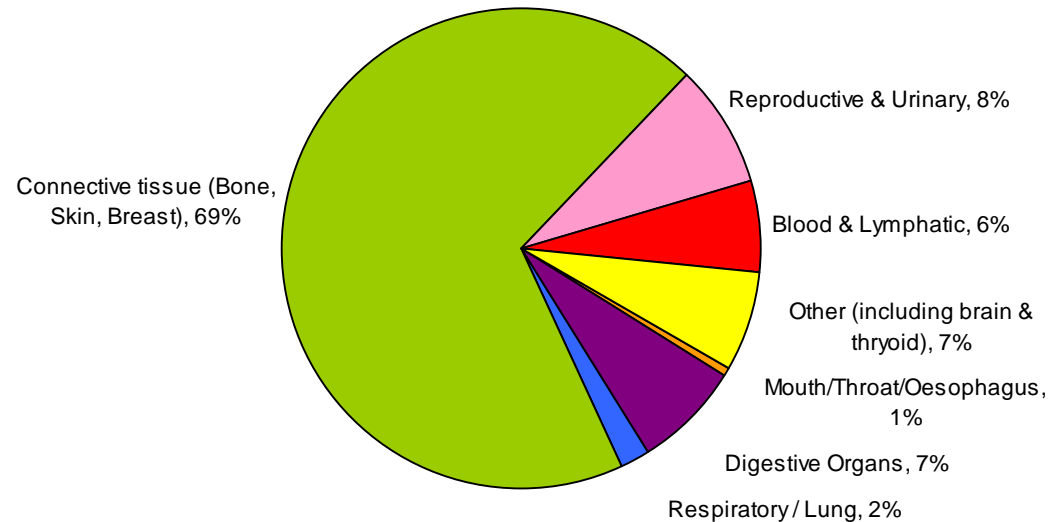
## Males (% Total)



Prostate cancer has the greatest incidence of cancer among males (23%)

Breast cancer by far has the greatest incidence of cancer among females (63%)

## Females (% Total)



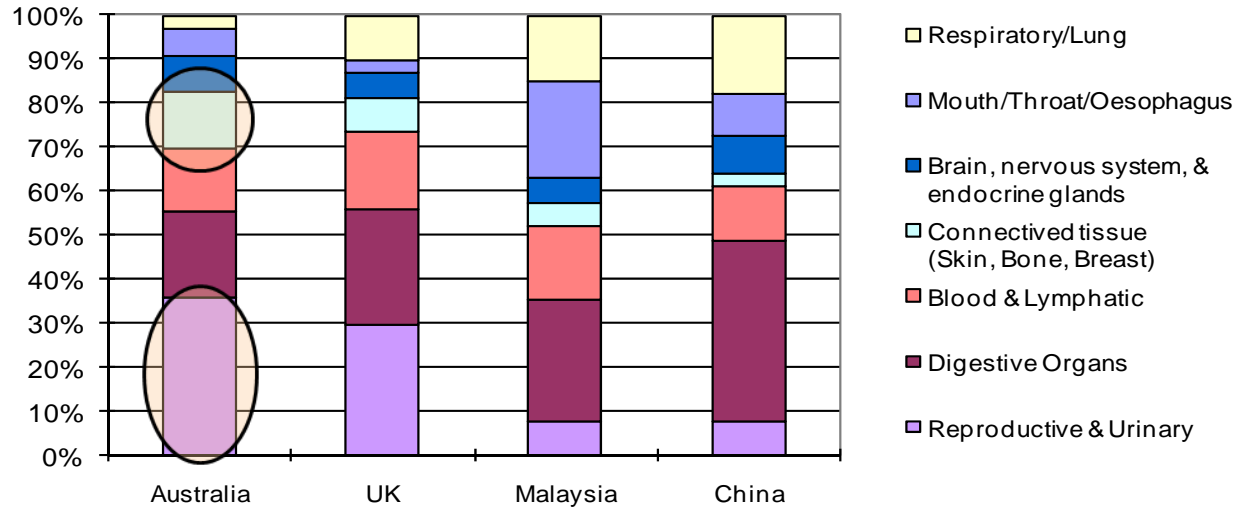
# Cancer Claims by Age and Site

Insured	Female					Male				
	20-29	30-39	40-49	50-59	60+	20-29	30-39	40-49	50-59	60+
Age Band										
Number of Claims	9	138	342	240	11	8	71	199	263	43
Mouth/Throat/Oesophagus	0%	0%	1%	1%	0%	0%	3%	7%	7%	5%
Digestive Organs	11%	8%	5%	10%	9%	13%	15%	21%	19%	23%
Respiratory/Lung	0%	1%	2%	3%	0%	0%	3%	3%	4%	2%
Connected tissue (Skin, Bone, Breast)	44%	67%	75%	64%	55%	13%	15%	20%	8%	5%
Reproductive & Urinary	22%	8%	8%	9%	9%	38%	24%	25%	46%	49%
Blood & Lymphatic	11%	7%	5%	7%	18%	25%	23%	19%	10%	7%
Brain, nervous system, & endocrine glands	11%	9%	5%	8%	9%	13%	17%	6%	7%	9%

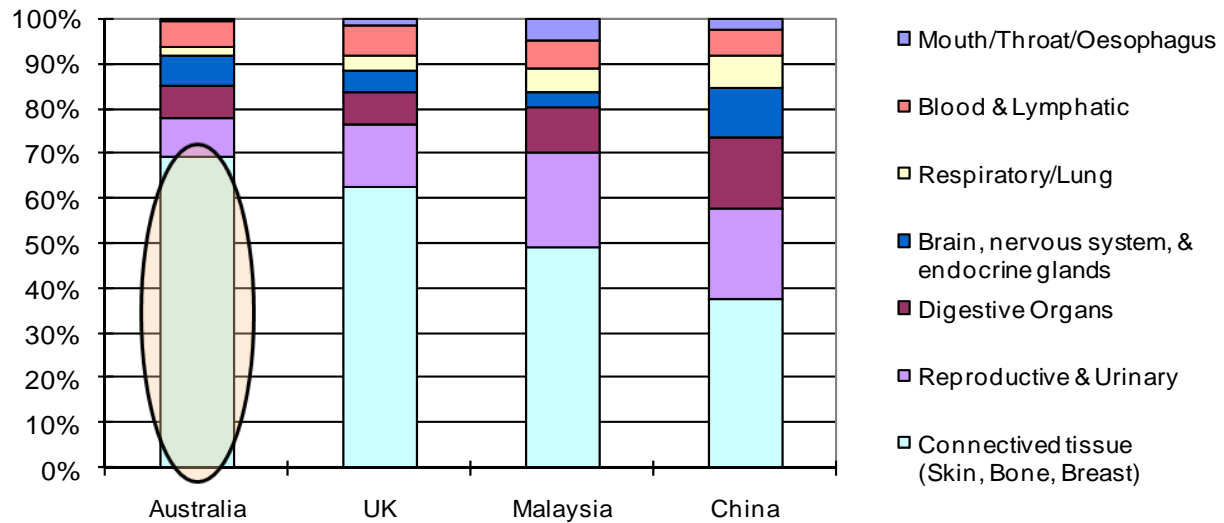
Population	Female					Male				
	20-29	30-39	40-49	50-59	60+	20-29	30-39	40-49	50-59	60+
Age Band										
Number of Claims	2743	8212	19748	31214	16380	2752	5517	11883	31578	23507
Mouth/Throat/Oesophagus	3%	2%	2%	2%	3%	5%	9%	11%	7%	6%
Digestive Organs	4%	7%	9%	13%	19%	4%	10%	18%	20%	21%
Respiratory/Lung	1%	1%	4%	6%	9%	2%	3%	7%	11%	12%
Connected tissue (Skin, Bone, Breast)	44%	55%	60%	53%	45%	31%	32%	26%	16%	11%
Reproductive & Urinary	14%	14%	12%	14%	14%	28%	21%	17%	32%	39%
Blood & Lymphatic	16%	8%	6%	7%	8%	21%	16%	14%	10%	9%
Brain, nervous system, & endocrine glands	18%	13%	7%	4%	3%	9%	9%	6%	4%	2%

# Cancer Claims International Comparison

## MALE



## FEMALE





*A Berkshire Hathaway Company*

**Thank you!**

**Questions?**