

Dread Disease Survey 2003

A survey prepared by **Gen Re**[™] | LifeHealth

For Singapore Actuarial Society, 26th July 2004

Presented by Andres Webersinke

Agenda

- Introduction to Gen Re's DD survey 2003
- Survey results
- Trend
- Company comparison
- For your consideration

Introduction

Soaring premiums making critical illness insurance a bitter pill

(UK Telegraph: 21/06/2003)

BT - 05/05/04

Premiums up for critical illness plan

PREMIUMS OF critical illness (CI) plans appear to have risen among some insurers, since the definitions of the illnesses were standardised last July.

the same definitions for dread diseases in insurance contracts. The move was expected to enhance the efficiency of claims procedures, as it left little room for dispute with clients

\$2,781 under its Asia Enhanced FlexiLife pre-July. After July, the premium was \$2,972.

For NTUC Income's Living plan, the premium re-

illnesses remain cancer, heart attack, stroke, coronary artery bypass surgery and kidney failure. Cancer accounts for 70 per cent of the claims.



Watchdog on alert over critical illness premiums

(UK Telegraph: 28/06/2004)

Participating Companies

Malaysia

- AIA
- Great Eastern Life
- Hong Leong
- ING
- John Hancock
- MAA
- Mayban
- Uni.Asia
- Prudential

Singapore

- AIA
- Great Eastern Life
- John Hancock
- Manulife
- NTUC Income
- Prudential
- UOB

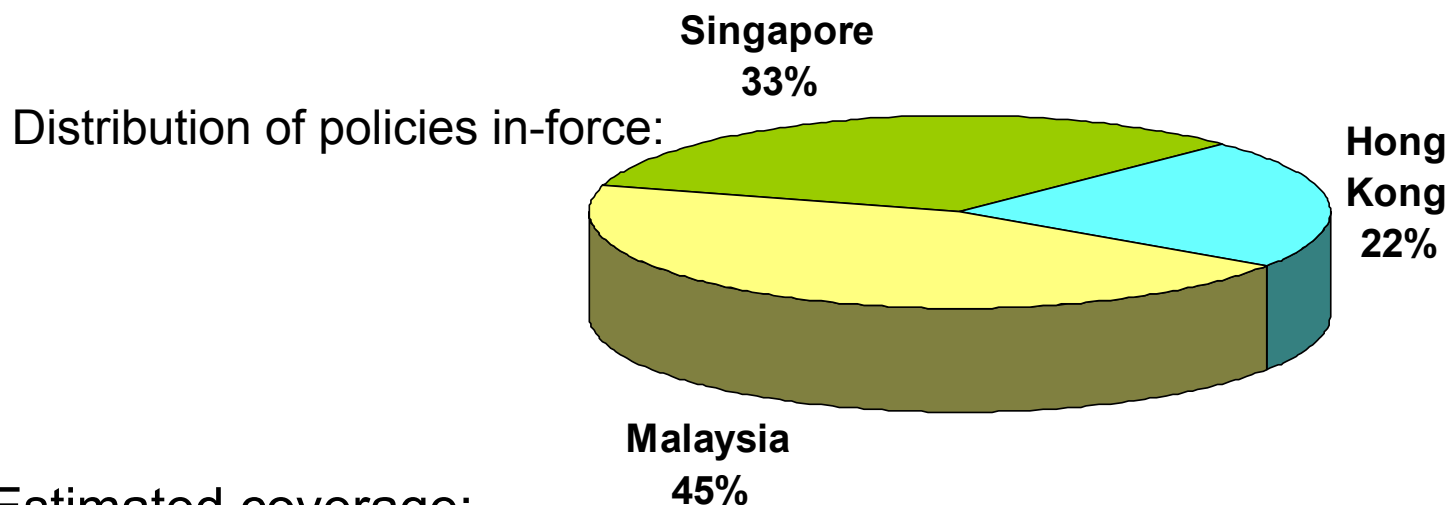
Participating Companies

Hong Kong

- AIA
- China Life
- CMG Asia
- Dah Sing Life
- Eagle Star
- HSBC
- ING
- Manulife
- MassMutual
- MLC
- New York Life
- John Hancock
- Pacific Century
- Standard Life
- Prudential
- Winterthur

Participation Rate

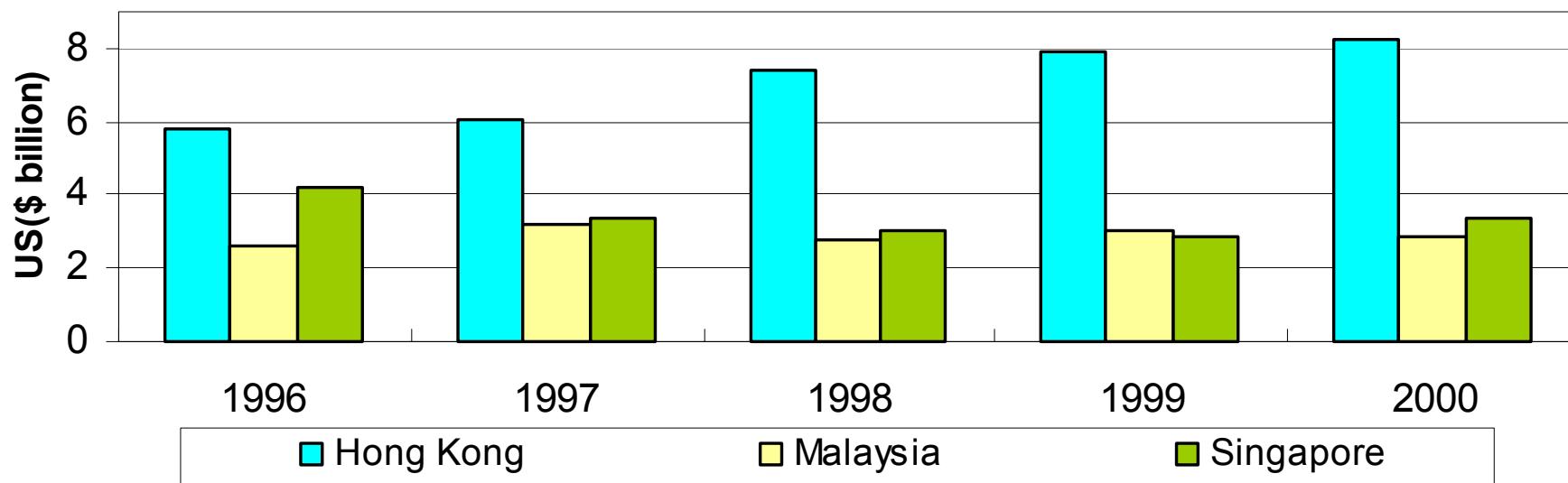
- Hong Kong (15), Malaysia (9) and Singapore (7)
- 4 million lives investigated (in-force at end of survey period)



- Estimated coverage:
 - over 80% in Malaysia and Singapore
 - over 70% in Hong Kong

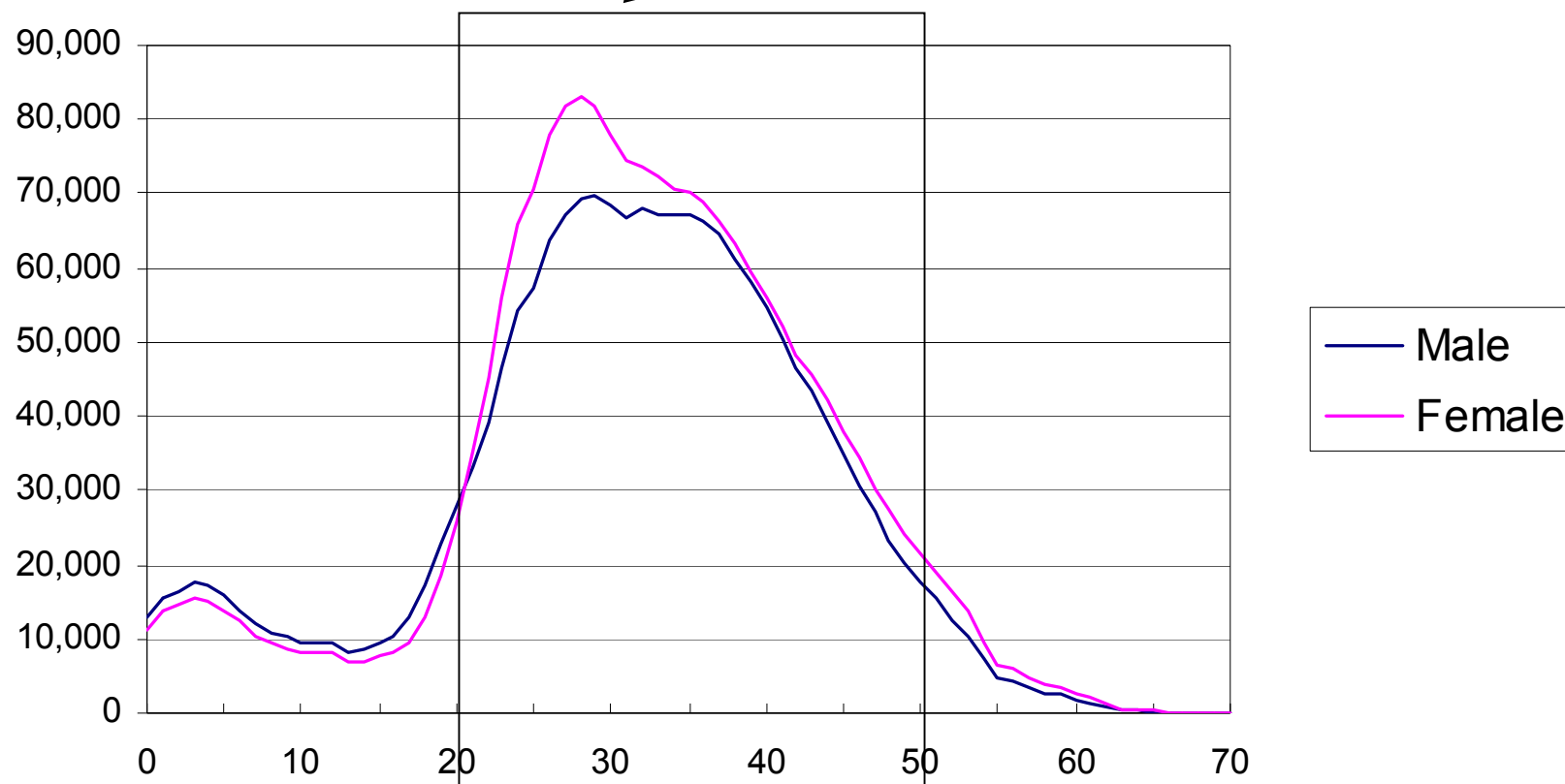
Sales Volume

Sum insured of new policies sold in each year



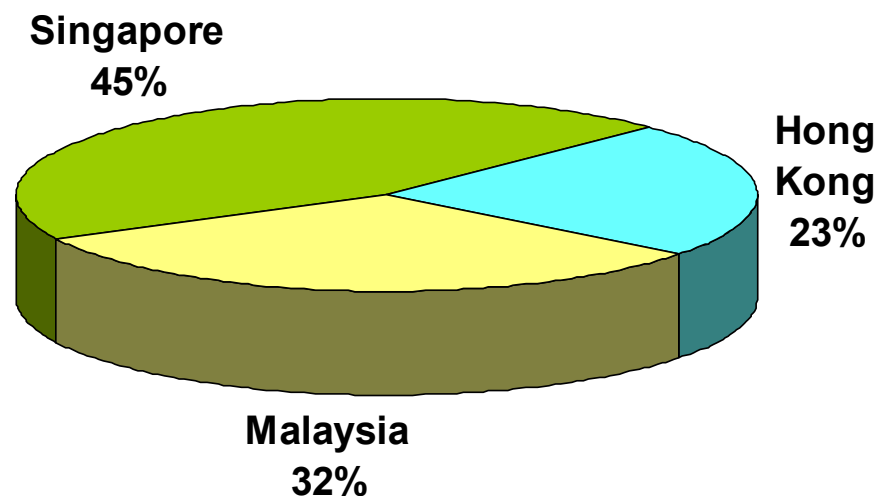
Distribution of In-Force Policies: 31.12.00

Age range with sufficient credible data



Survey Basis

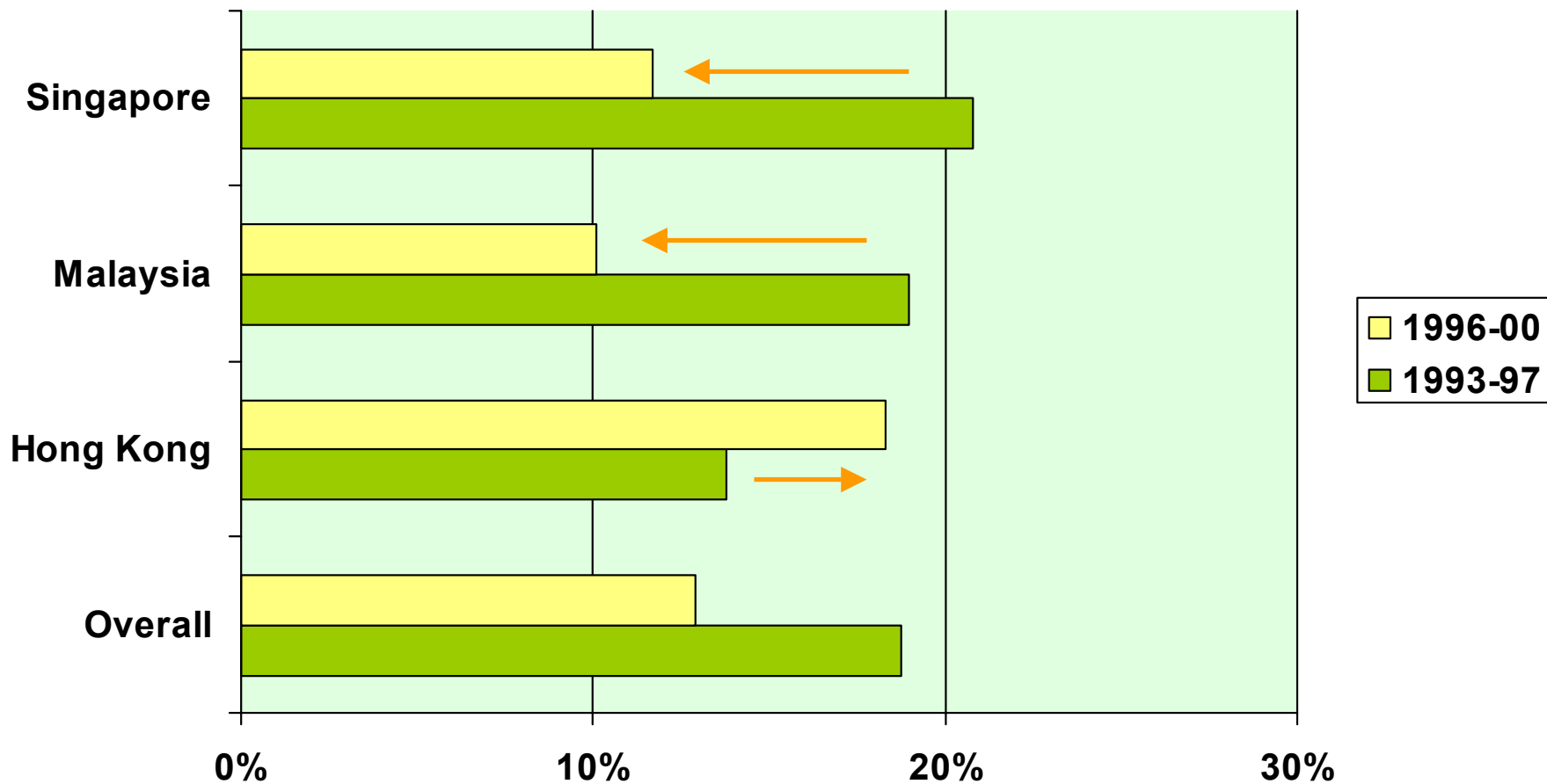
- > 16,500 claims in total
- > 13,800 Dread Disease claims (of which 87% admitted)
- 8,753 claims is basis for calculated graduated rates (duration: 2+)
- Admitted claims (counted by number of policies):



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- Introduction to Gen Re's DD survey 2003
- Survey results
 - Declinature rate
 - Average sum insured
 - Cause of claim
 - Selection Effect
 - Incidence rates
- Trend
- Company comparison
- For your consideration

Declinature Rate

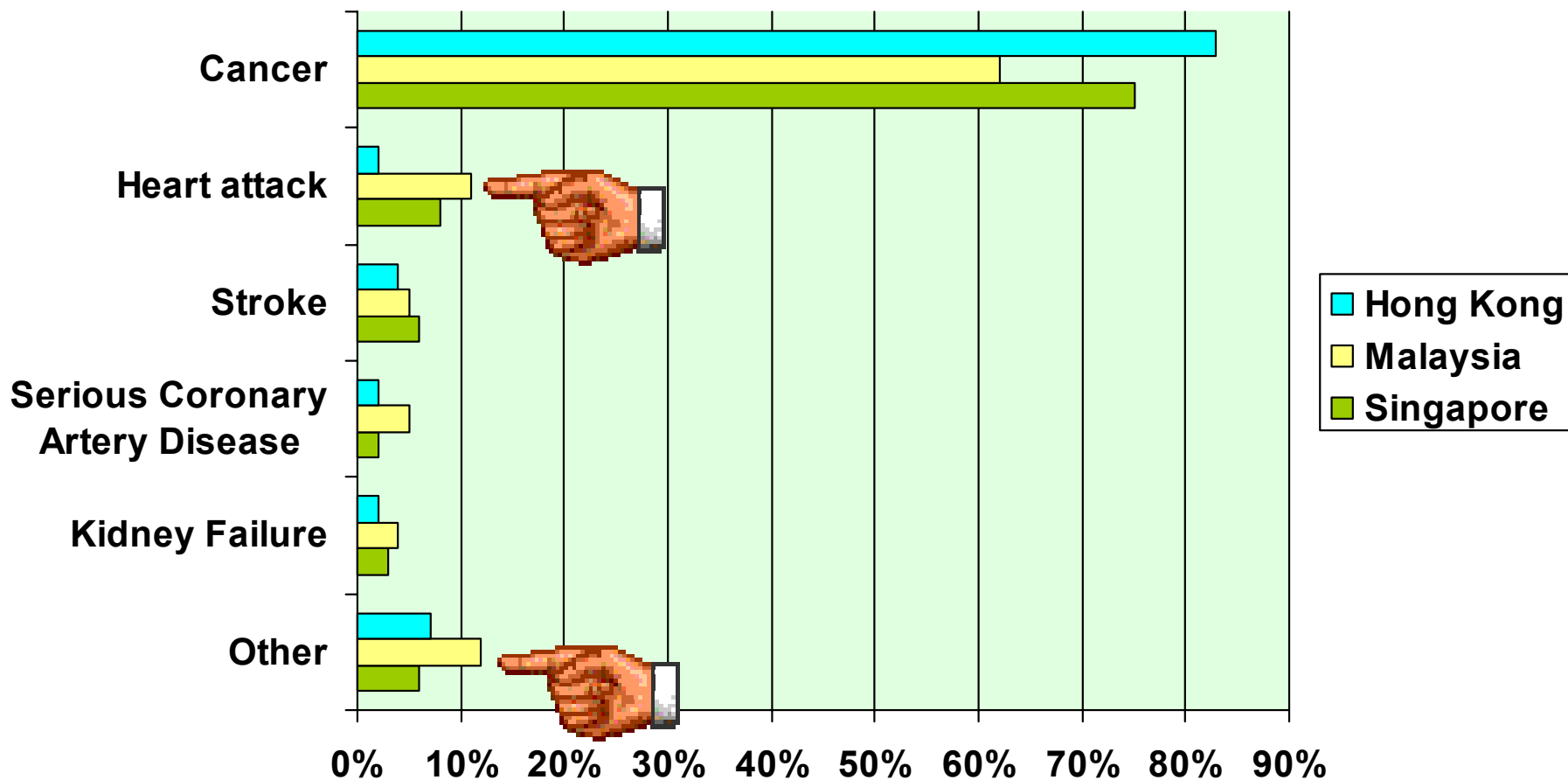


Average Sum Insured

- Average claim amount overall lower than average sum insured
 - Hong Kong: -10.5%
 - Malaysia: -2.5%
 - Singapore: -12.8%
- For additional-type plans only and Singapore only the opposite is correct
 - Singapore: +15.5%

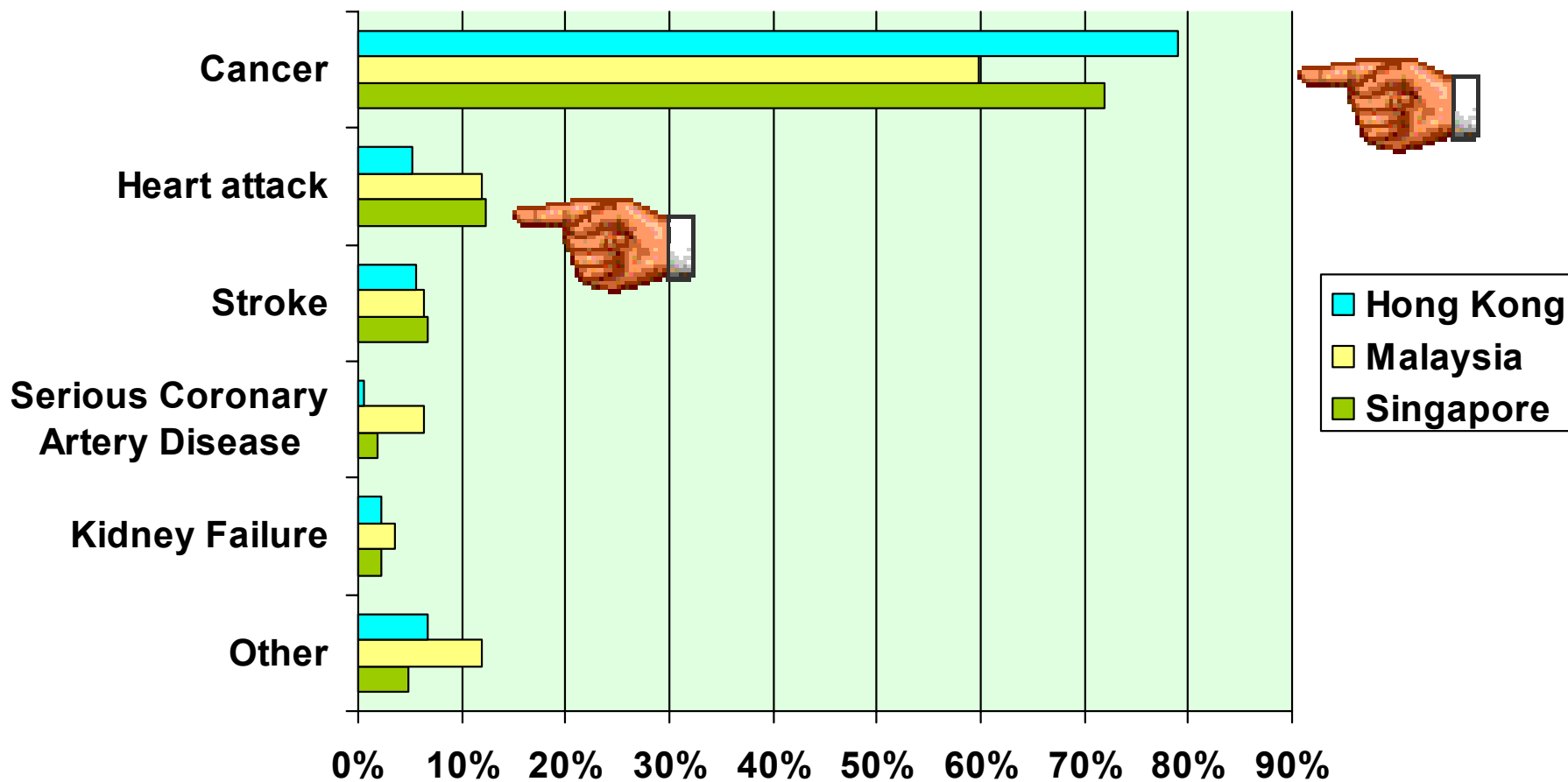
Cause of Claim – previous survey result

1993 - 1997



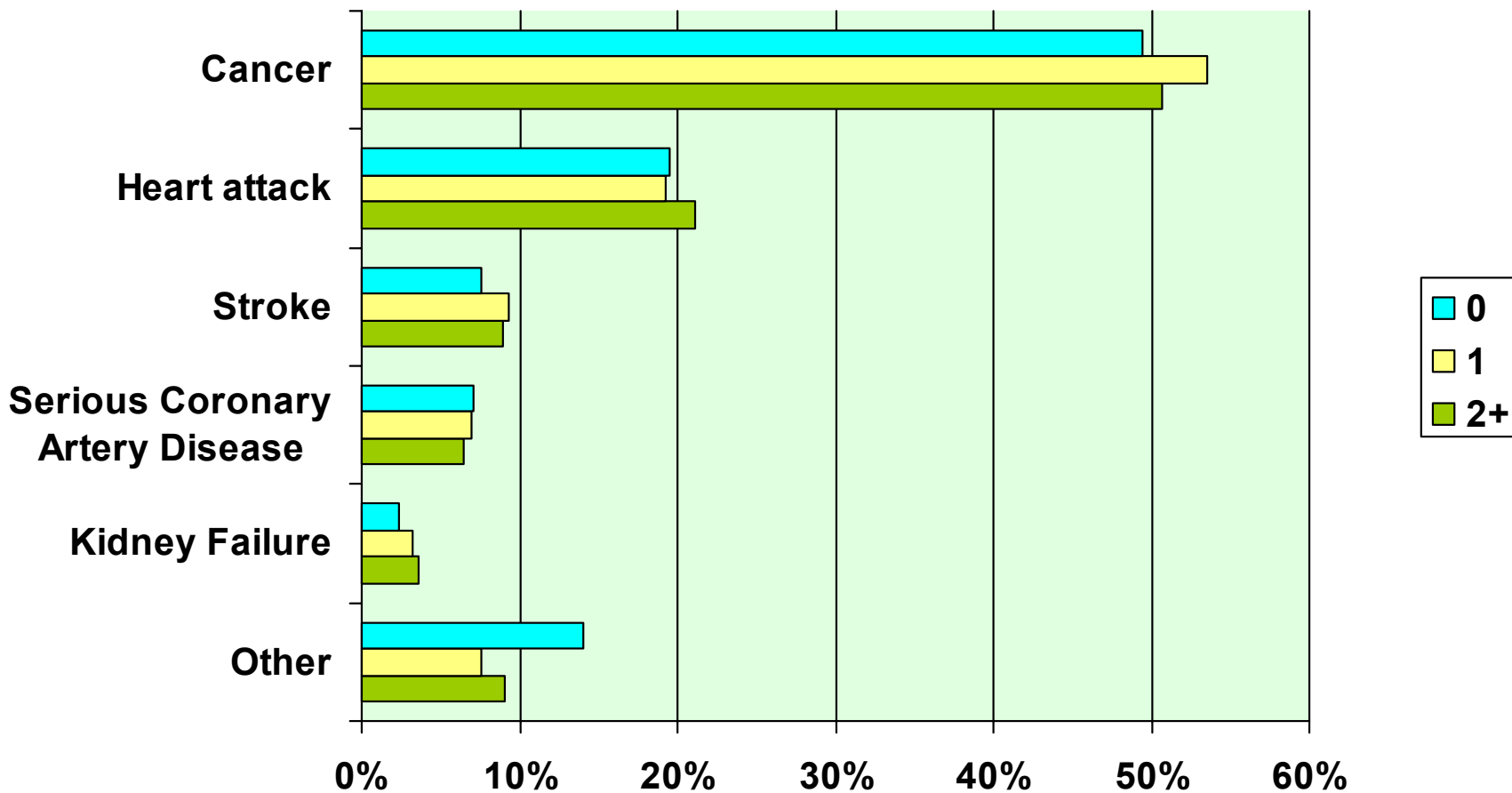
Cause of Claim

1996 - 2000



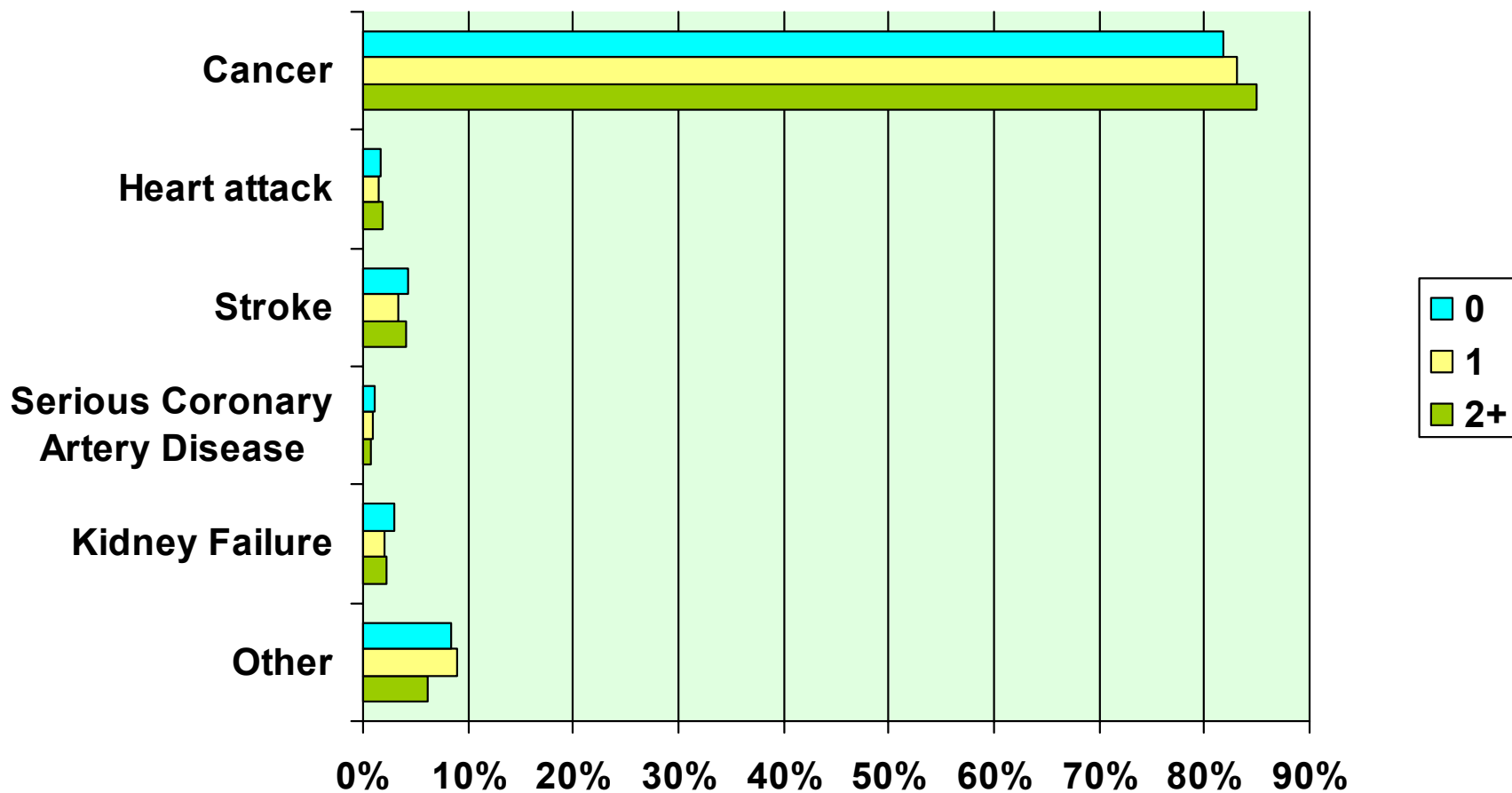
Cause of Claim – Males

By Duration



Cause of Claim – Females

By Duration



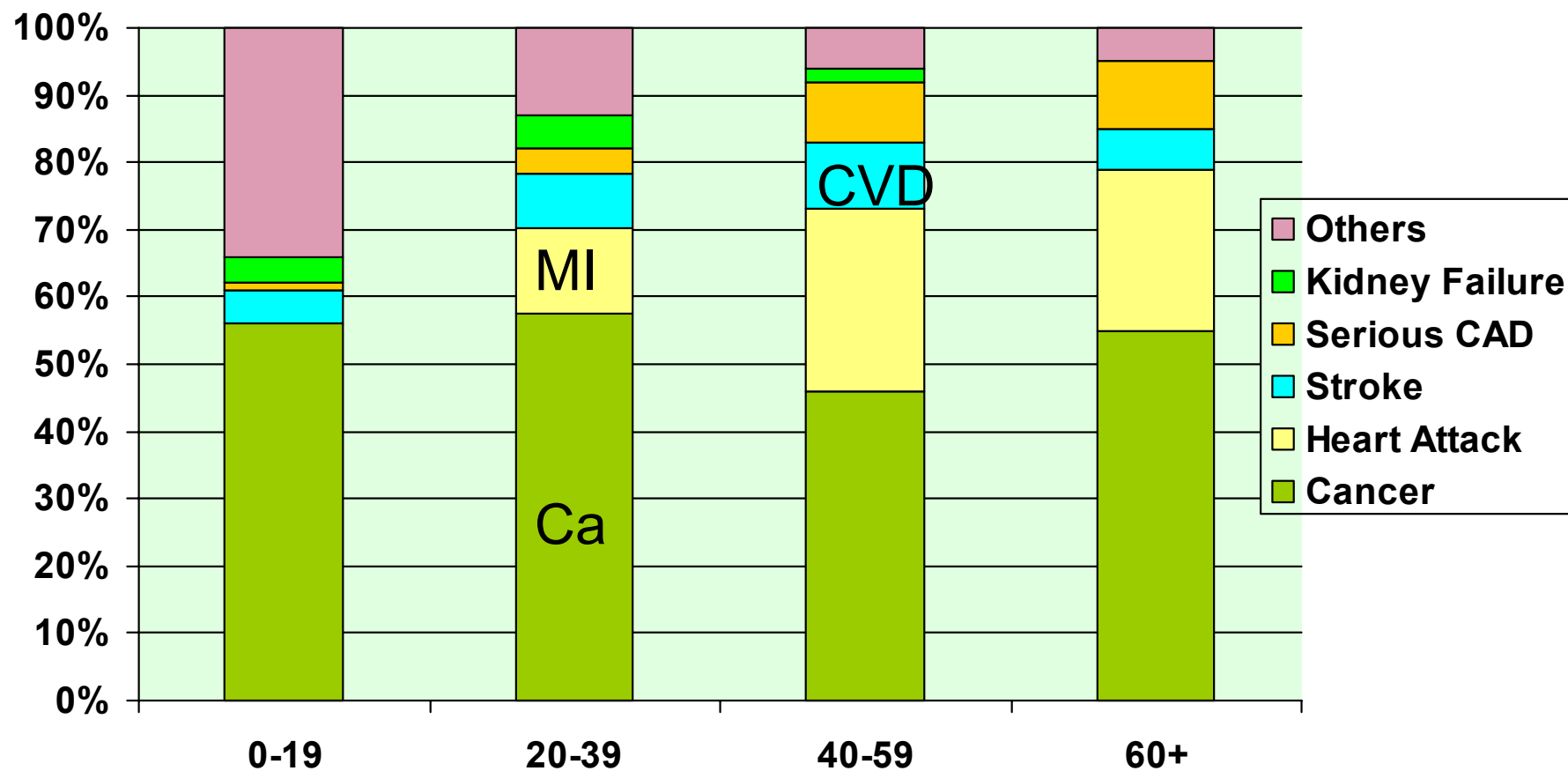
Cause of Claim – Males

Claims: 103

1781

2388

62



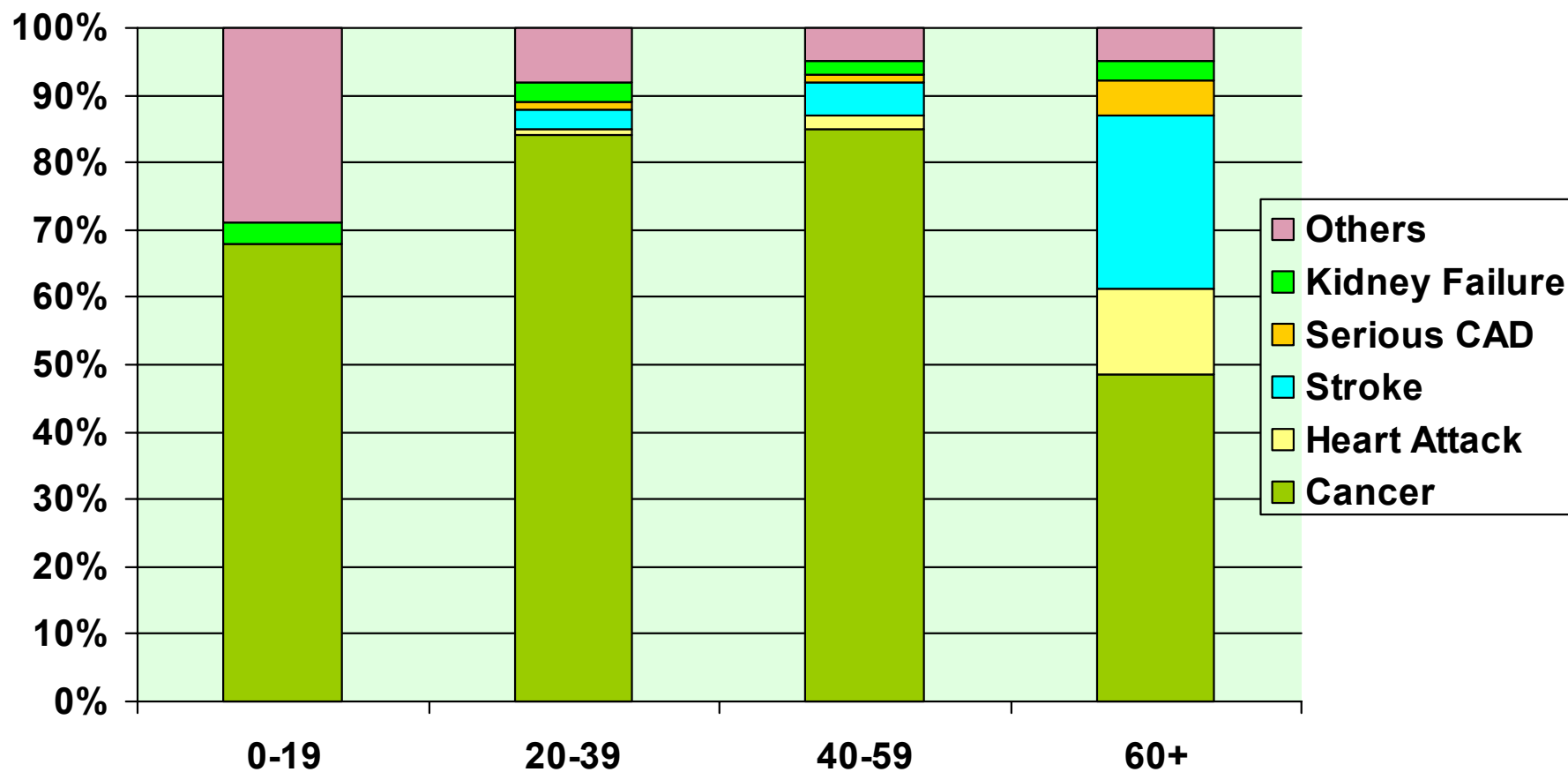
Cause of Claim – Females

Claims: 68

2297

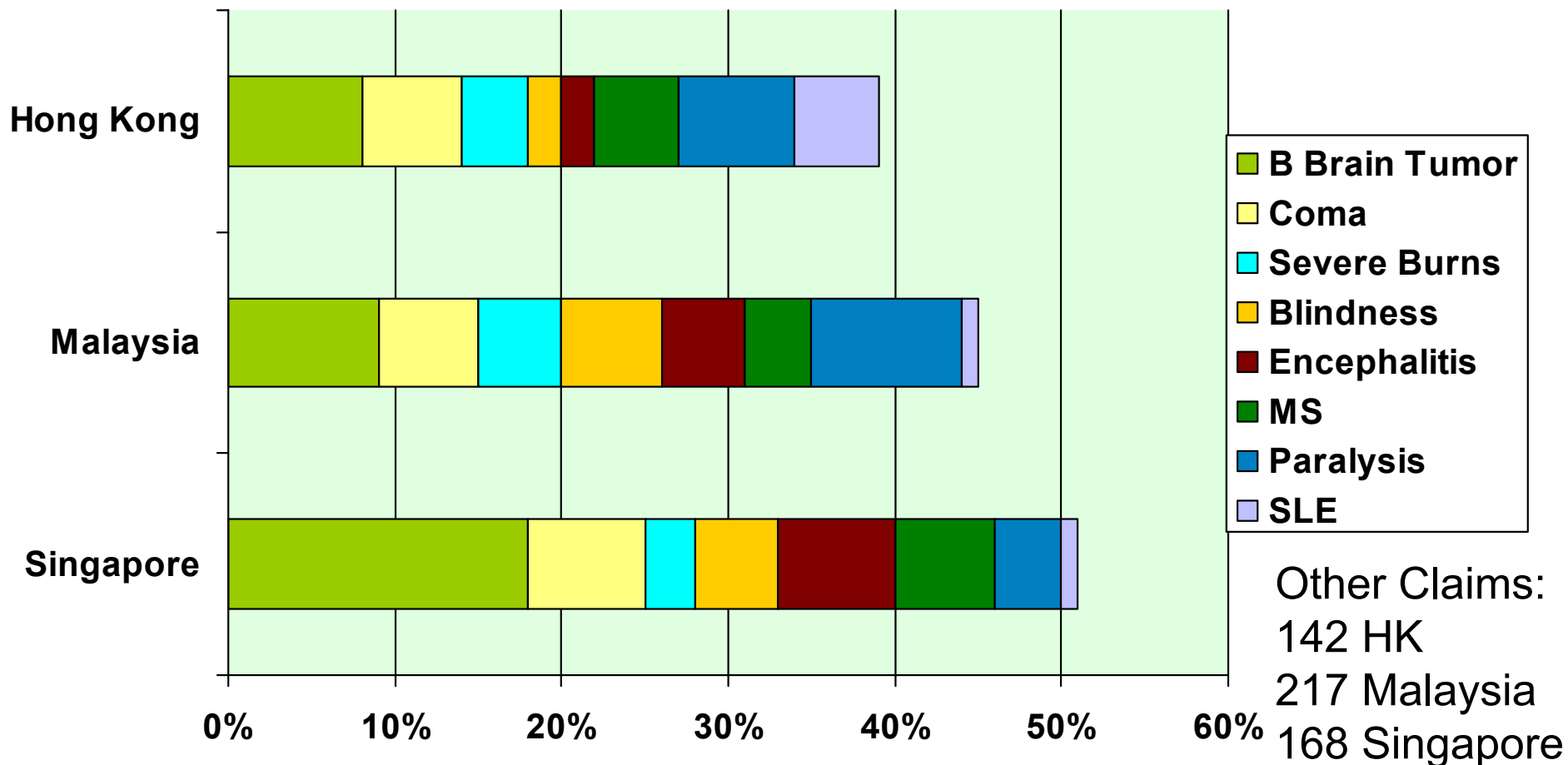
2780

39



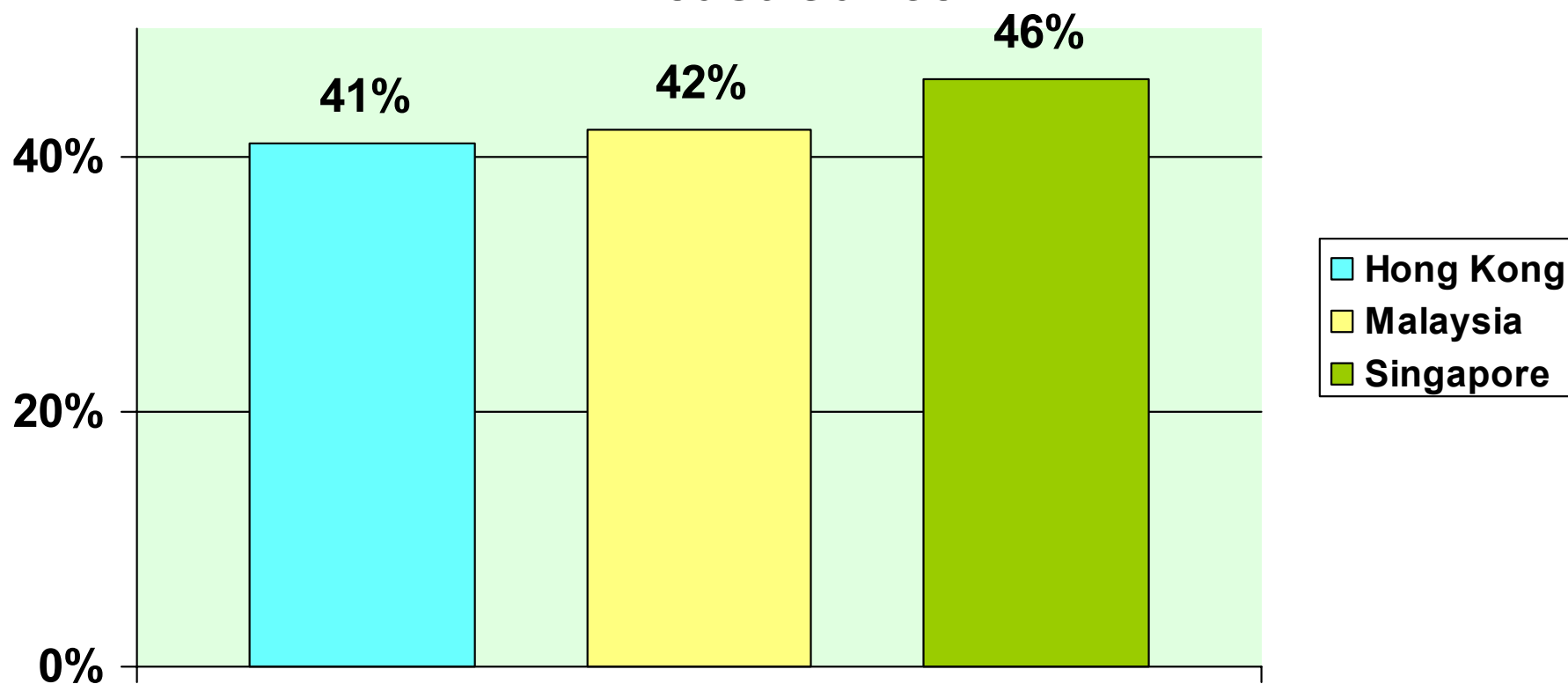
Cause of Claim

"Other Claims" - excl. TPD



Cancer Claims – Females

% of Female Cancer Claims due to Breast Cancer

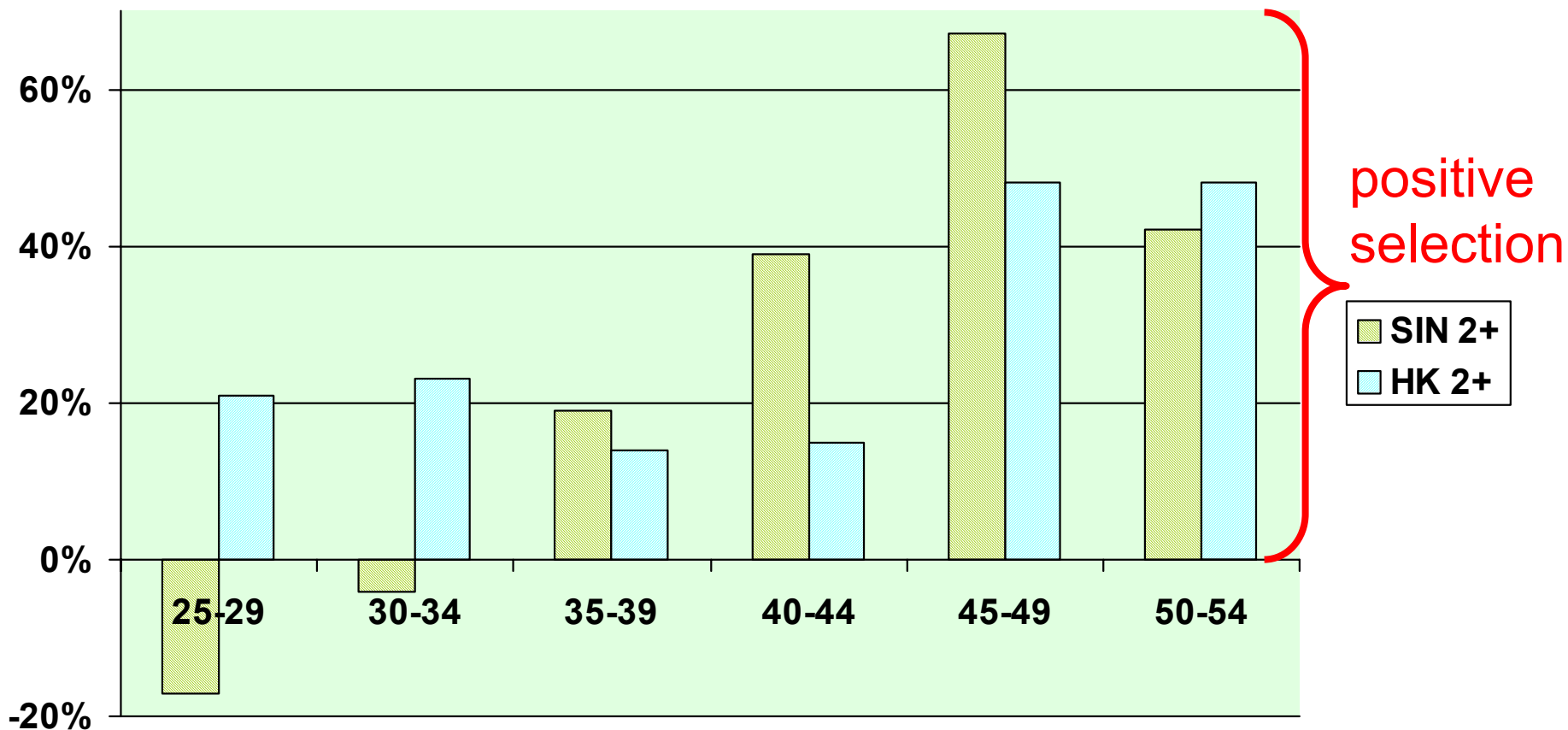


Selection Effect: Insured Lives' Cancer Rates

- Comparing survey results with population statistics on cancer (all sites excluding skin)
- Notes:
 - Some companies did not provide cause of death for acceleration-type policies
 - Population cancer statistics include cancers not necessarily covered
 - Population statistics may include more than one primary cancer site
 - For Malaysia only limited population data is available

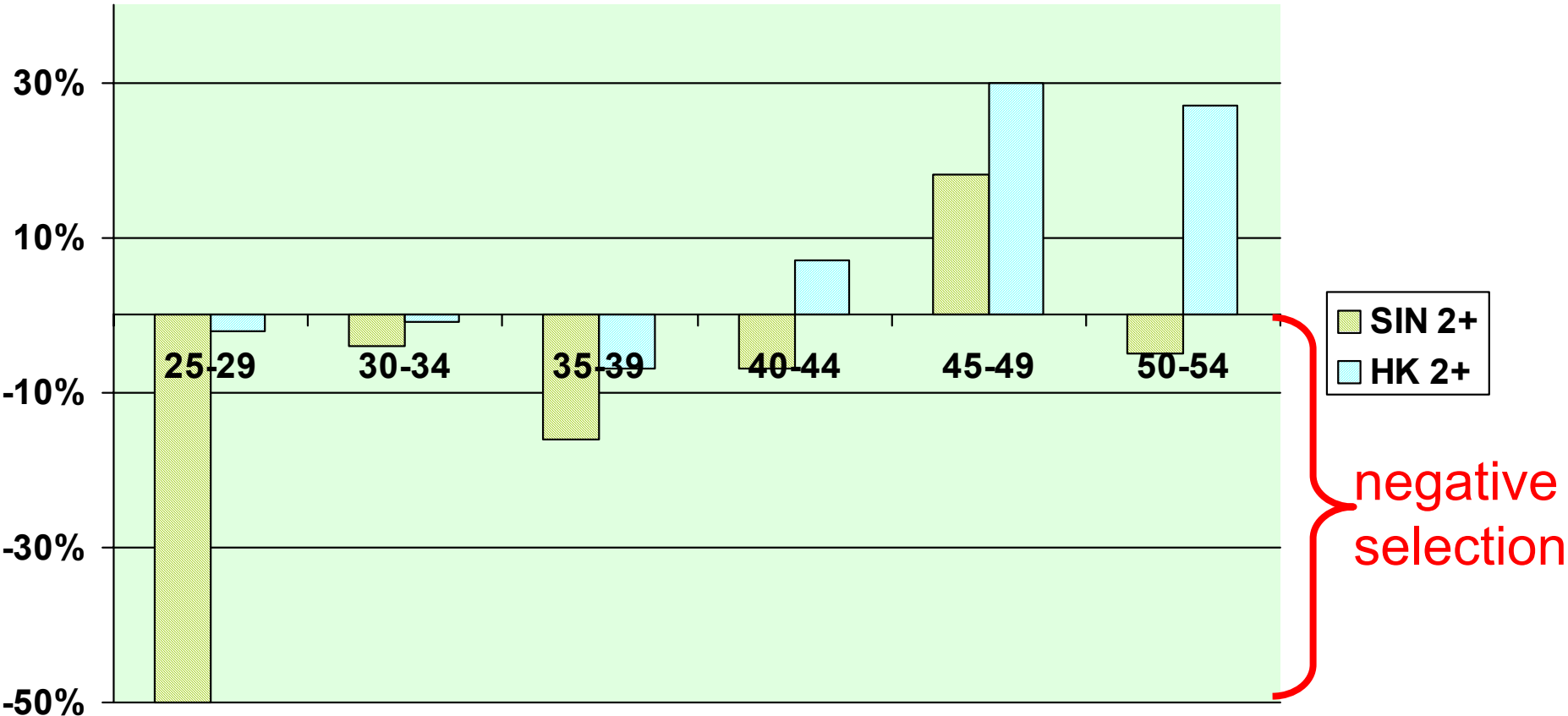
Selection Effect: Insured Lives' Cancer Rates

Males



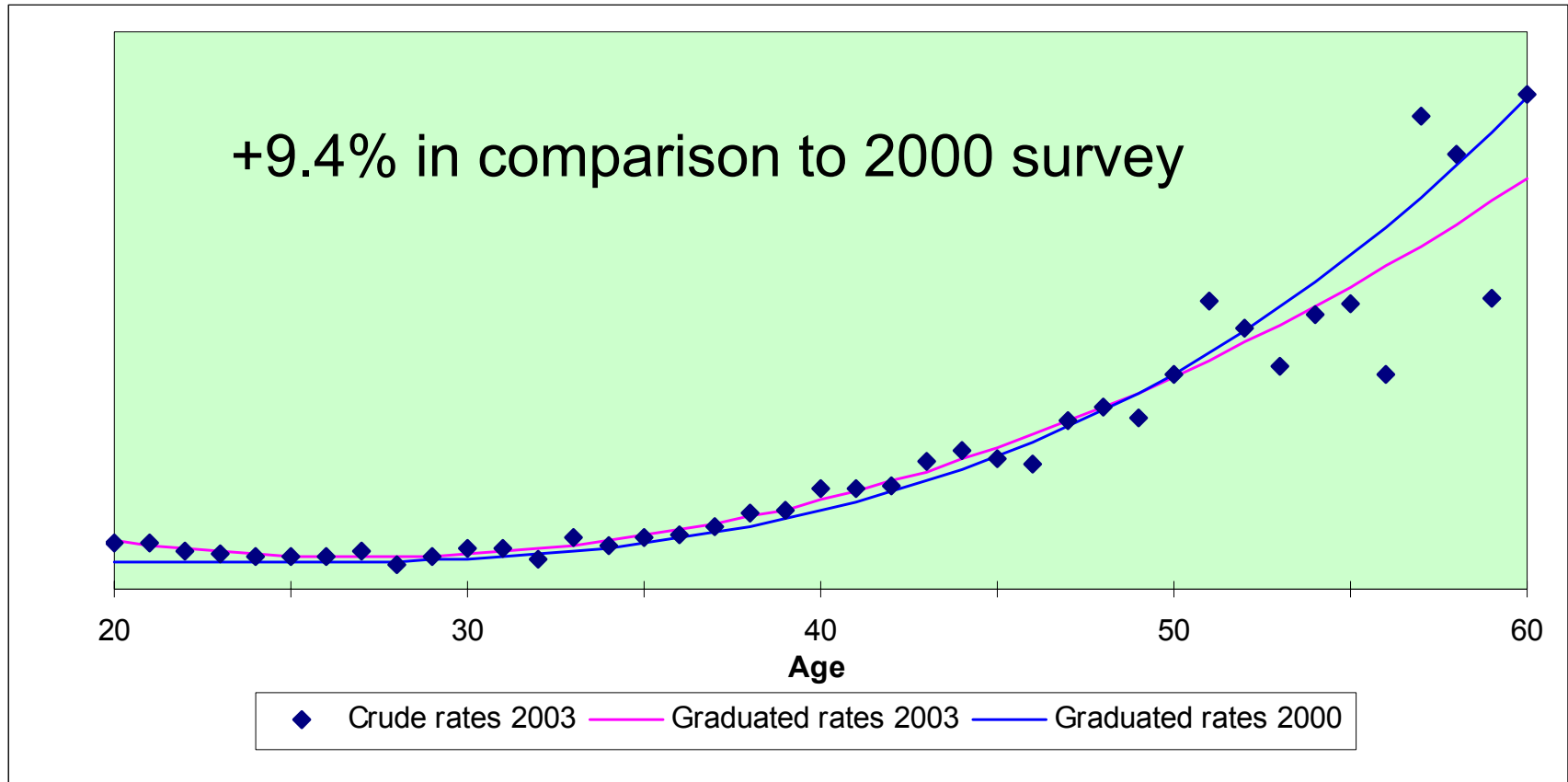
Selection Effect: Insured Lives' Cancer Rates

Females



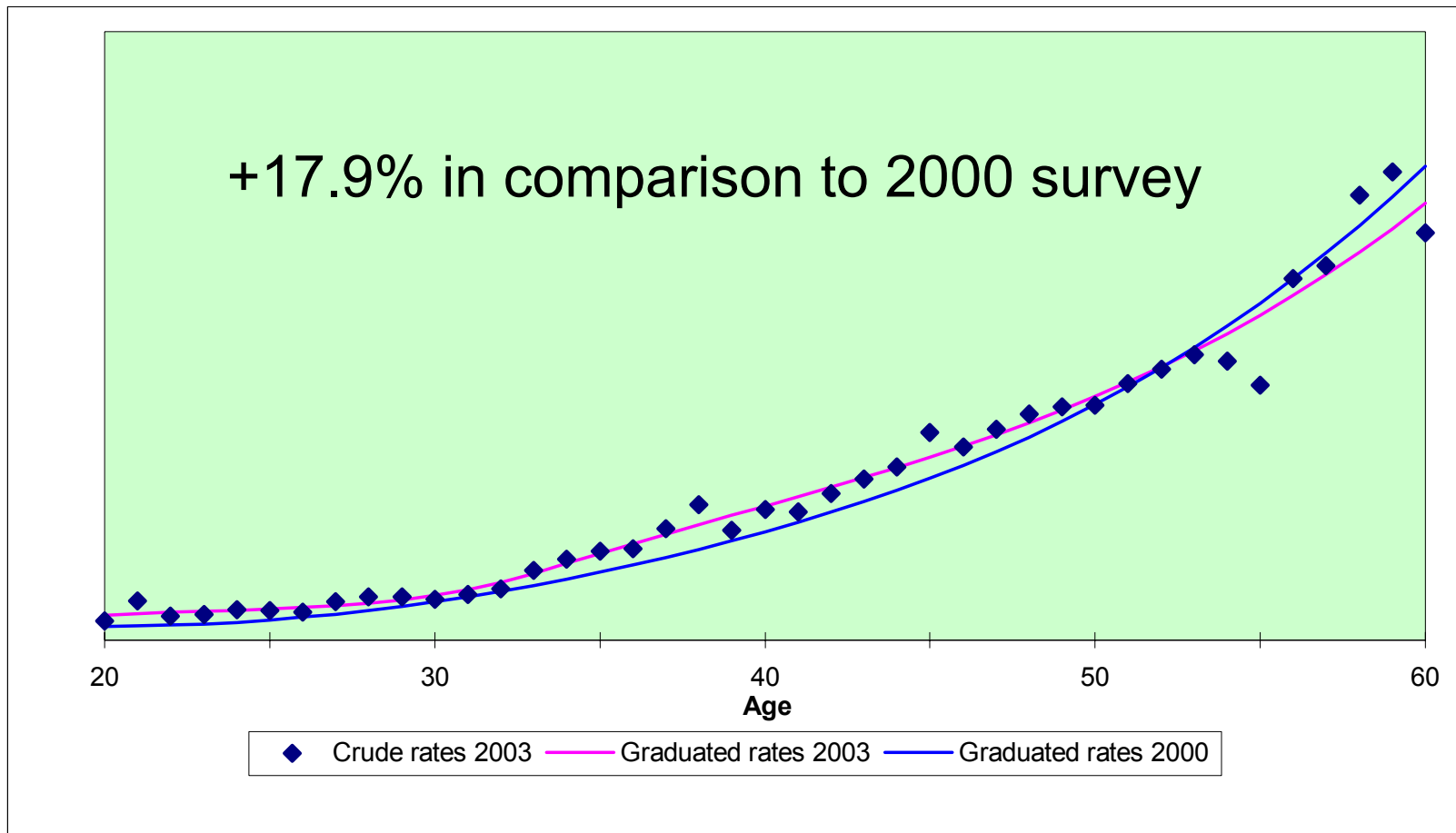
Incidence Rates: Death with Acceleration DD – Males

Based on 2,301 actual claims



Incidence Rates: Death with Acceleration DD – Females

Based on 2,291 actual claims



Initial Selection Effect

- Duration 0 exposure = No of lives * (1 – waiting period in days / 365)

Initial Selection Effect by Territory

Acceleration DD, age range 20 – 60, males

	All territories	
	No of claims	A/E
Duration 0	602	110%
Duration 1	655	99%
Duration 2+	2899	100%

Initial Selection Effect by Territory

Acceleration DD, age range 20 – 60, males

	All territories		Hong Kong	Malaysia	Singapore
	No of claims	A/E	A/E	A/E	A/E
Duration 0	602	110%	93%	135%	94%
Duration 1	655	99%	91%	102%	103%
Duration 2+	2899	100%	98%	103%	99%

Initial Selection Effect by Territory

Acceleration DD, age range 20 – 60, females

	All territories	
	No of claims	A/E
Duration 0	664	90%
Duration 1	743	81%
Duration 2+	3713	100%

Initial Selection Effect by Territory

Acceleration DD, age range 20 – 60, females

	All territories		Hong Kong	Malaysia	Singapore
	No of claims	A/E	A/E	A/E	A/E
Duration 0	664	90%	86%	96%	88%
Duration 1	743	81%	85%	71%	92%
Duration 2+	3713	100%	107%	82%	109%

Initial Selection Effect for Additional-Type DD

Additional DD (less credible)

	Males		Females	
	No of claims	A/E	No of claims	A/E
Duration 0	60	80%	73	73%
Duration 1	75	89%	91	80%
Duration 2+	412	100%	600	100%

Analysis by Smoking Status

	Males		Females	
	No of claims	A/E	No of claims	A/E
Acceleration DD				
• Smoker	625	+57%	91	+58%
• Nonsmoker	1206	91%	2174	93%
Additional DD				
• Smoker	109	+49%	24	+79%
• Nonsmoker	224	94%	471	104%

Analysis by Smoking Status

- Singapore alone experienced a stronger smoker differential
 - Acceleration DD
 - Males: + 62%
 - Females: + 160%

Analysis of Mortality Rates

Duration 2+, age range 20 – 60, males

	All territories	
	No of claims	A/E
Death + Acc DD	2301	100%
Death	739	32%
Acc DD (deaths reported)	1562	68%

Analysis of Mortality Rates

Duration 2+, age range 20 – 60, males

	All territories		Hong Kong	Malaysia	Singapore
	No of claims	A/E	A/E	A/E	A/E
Death + Acc DD	2301	100%	89%	119%	81%
Death	739	32%	16%	50%	24%
Acc DD (deaths reported)	1562	68%	72%	70%	57%

Analysis of Mortality Rates

Duration 2+, age range 20 – 60, females

	All territories	
	No of claims	A/E
Death + Acc DD	2291	100%
Death	326	14%
Acc DD (deaths reported)	1965	86%

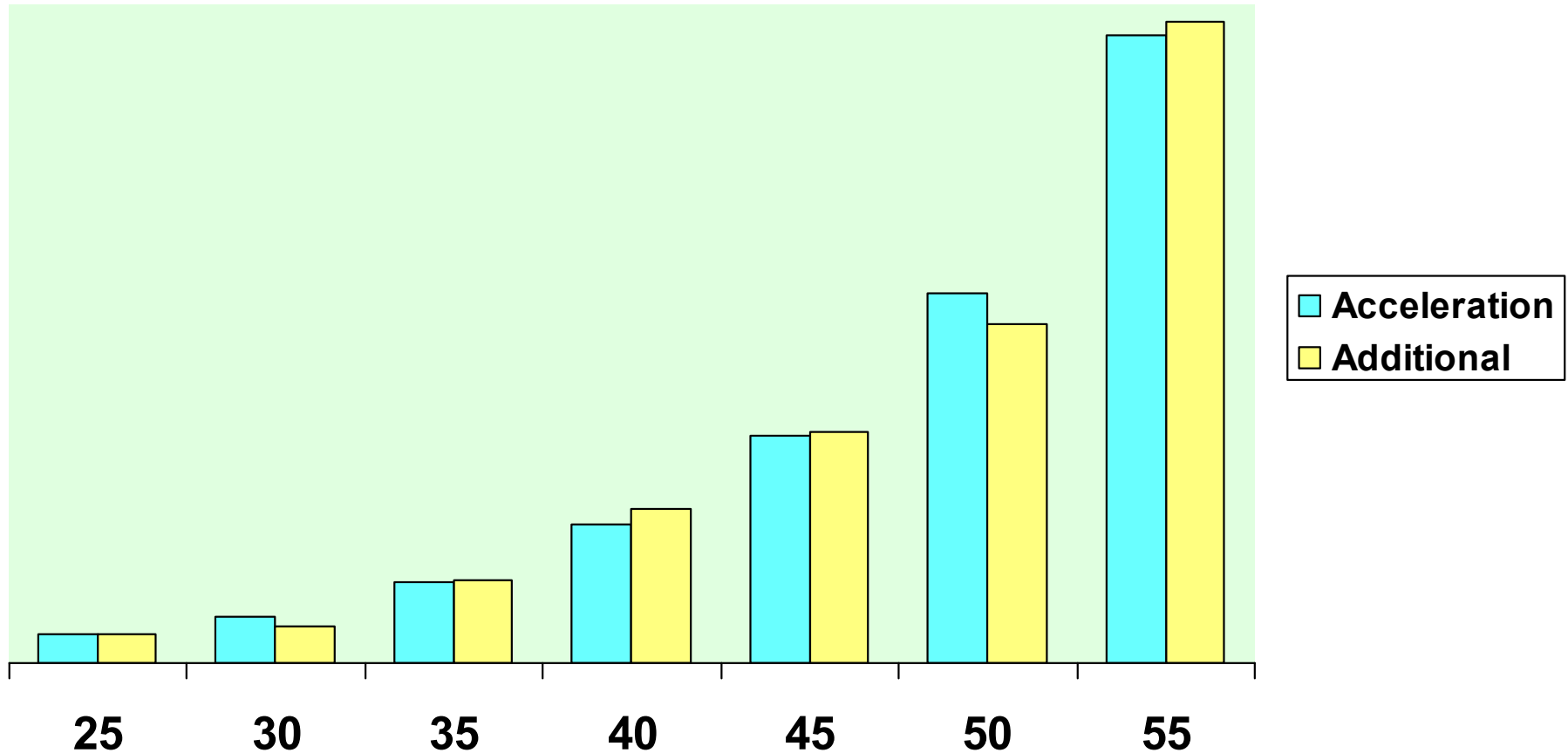
Analysis of Mortality Rates

Duration 2+, age range 20 – 60, females

	All territories		Hong Kong	Malaysia	Singapore
	No of claims	A/E	A/E	A/E	A/E
Death + Acc DD	2291	100%	98%	92%	120%
Death	326	14%	6%	21%	14%
Acc DD (deaths reported)	1965	86%	92%	71%	106%

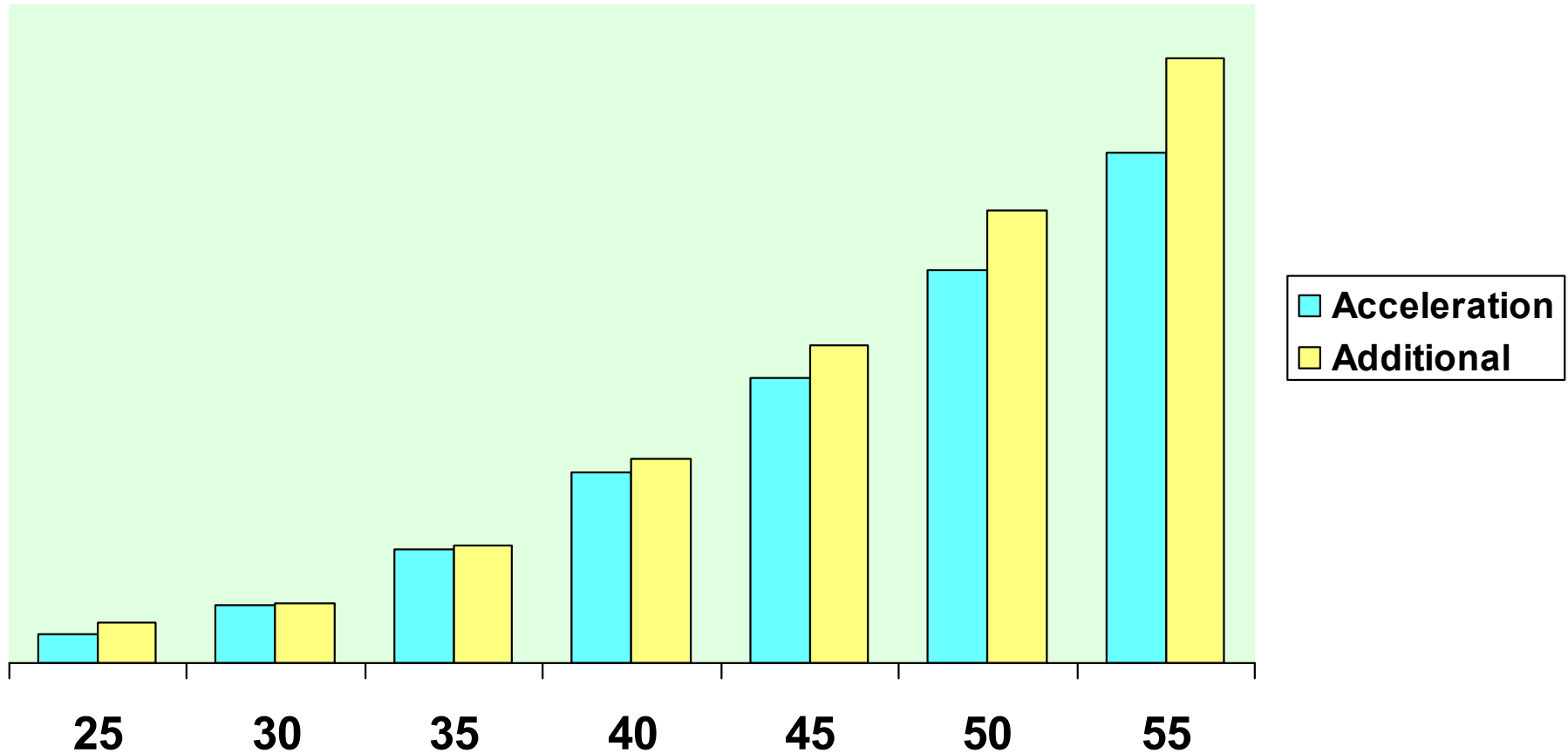
Incidence Rates Acceleration DD vs. Additional DD

Males



Incidence Rates Acceleration DD vs. Additional DD

Females

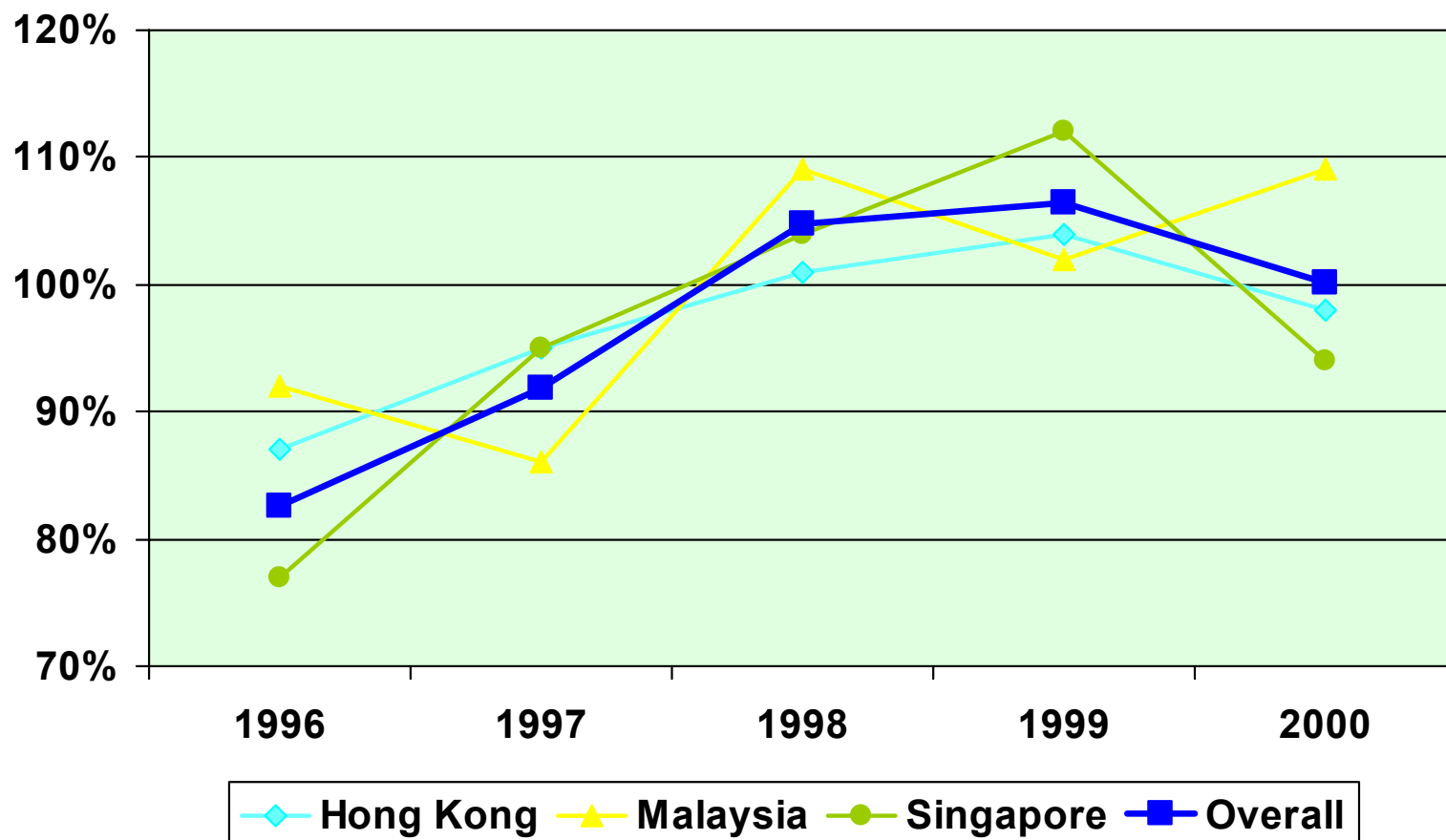


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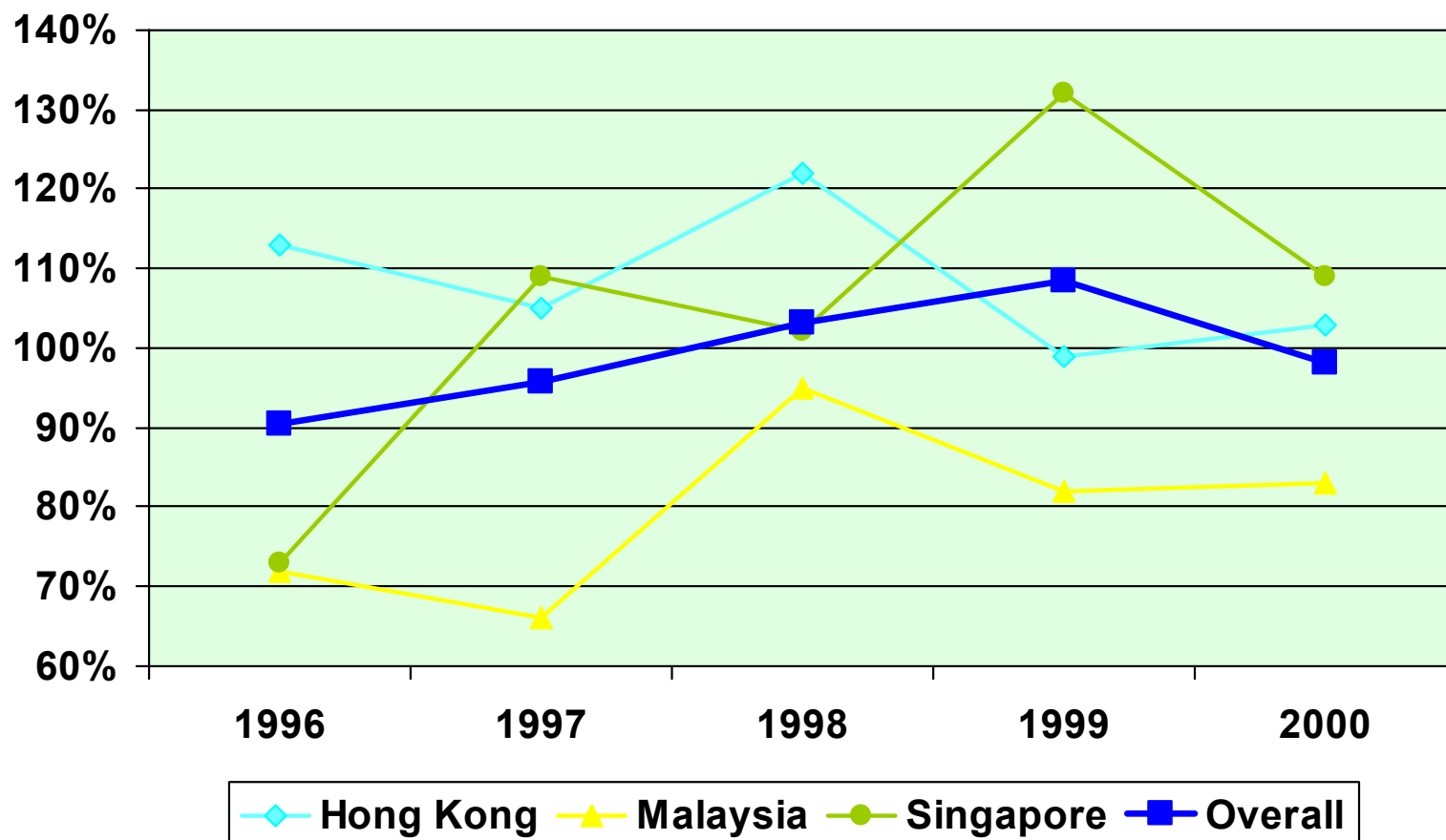
Analysis by Calendar Year – Males

Acceleration-type



Analysis by Calendar Year – Females

Acceleration-type

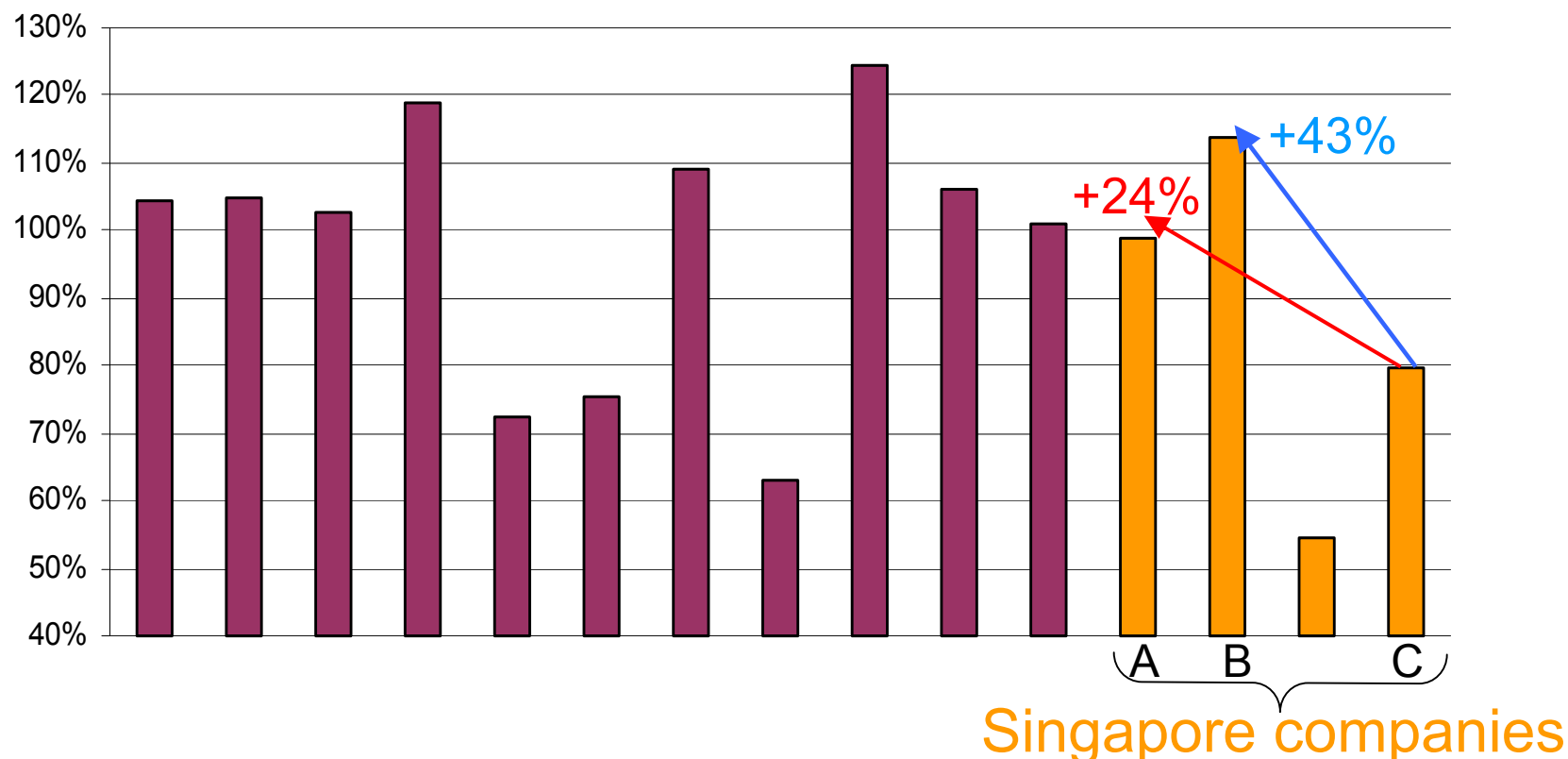


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- **Company comparison**
- For your consideration

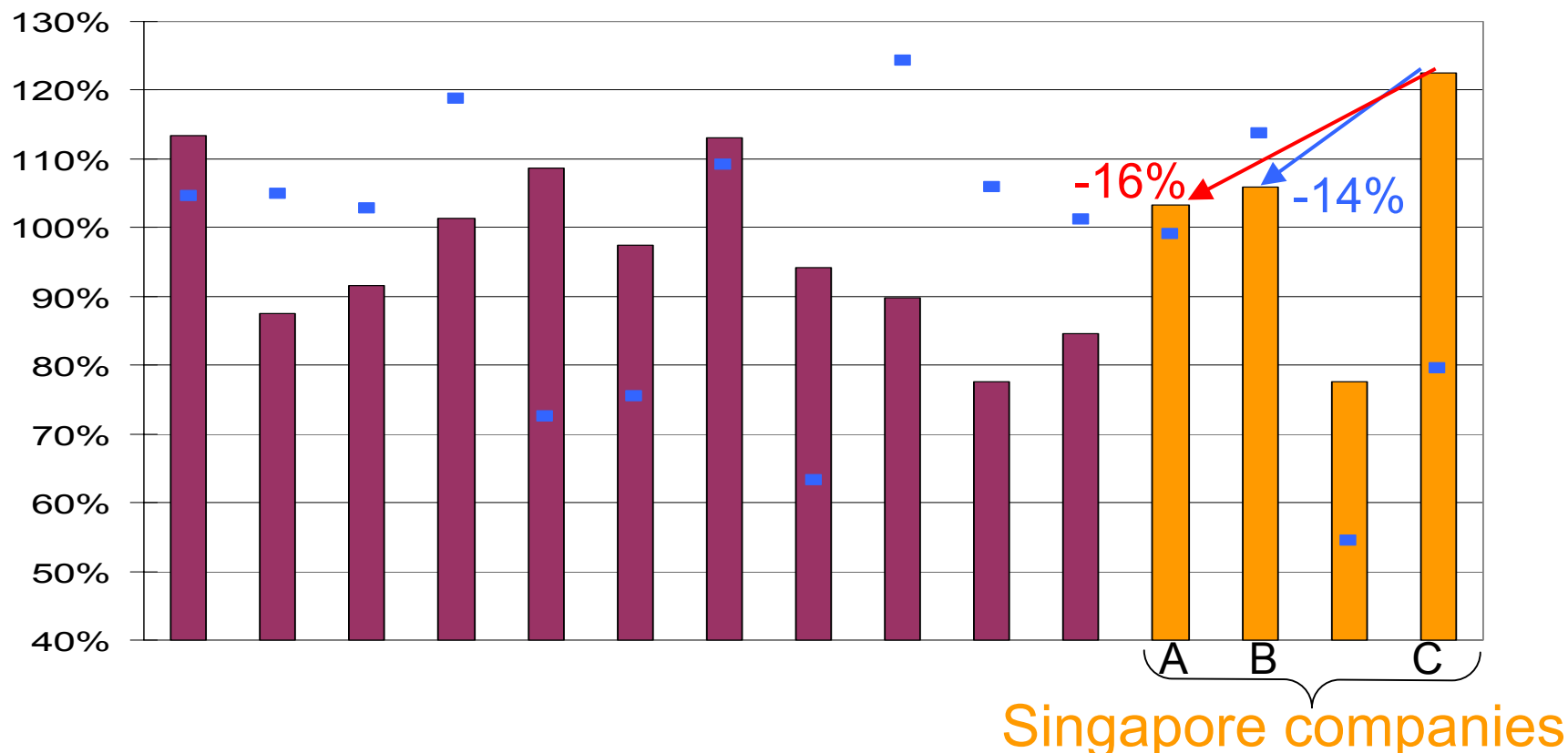
Analysis by Company – Males

- 24 of 31 companies provided valid exposure data
- 15 of the 24 companies reported at least 10 claims for both genders
- Duration 2+, acceleration-type

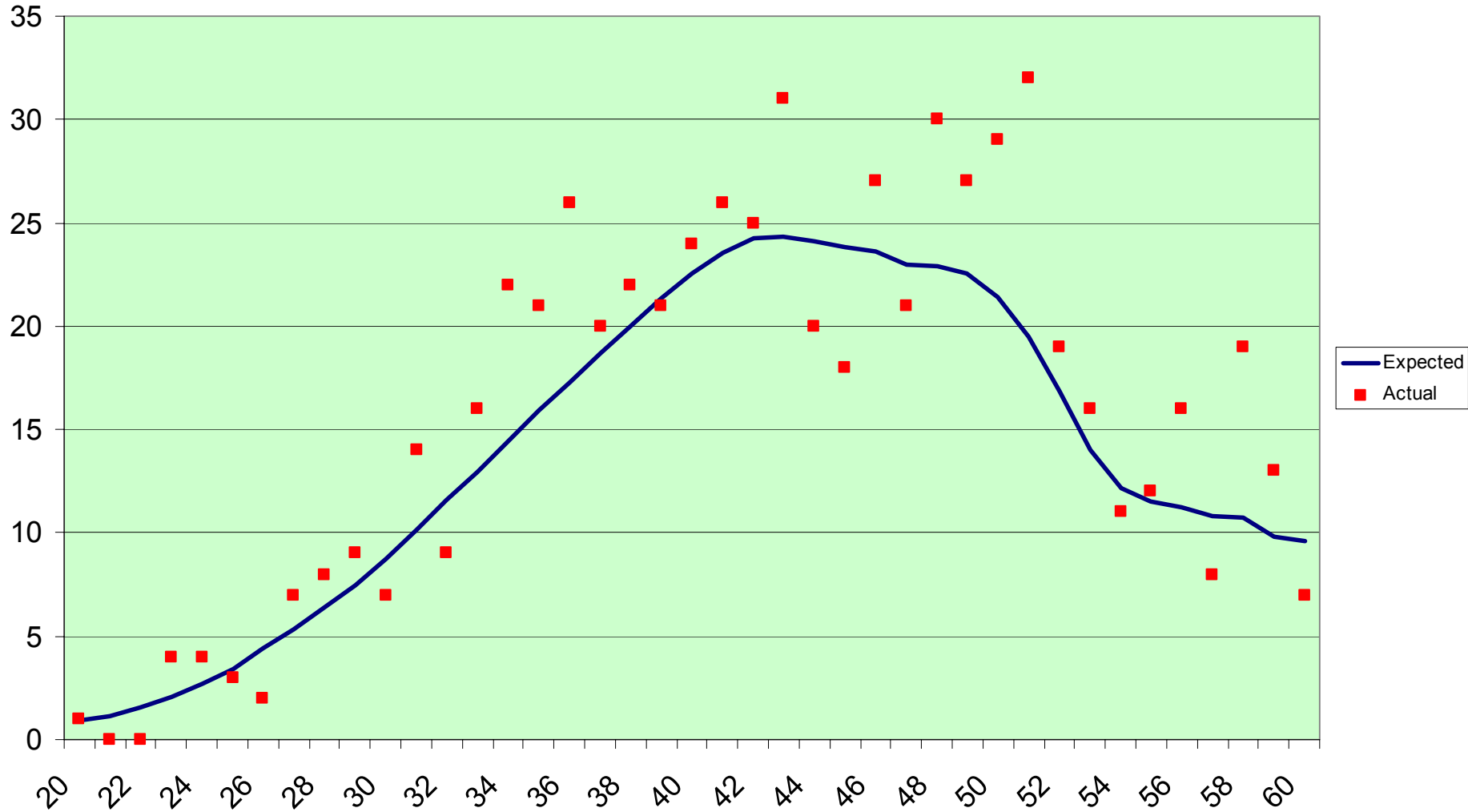


Analysis by Company – Females

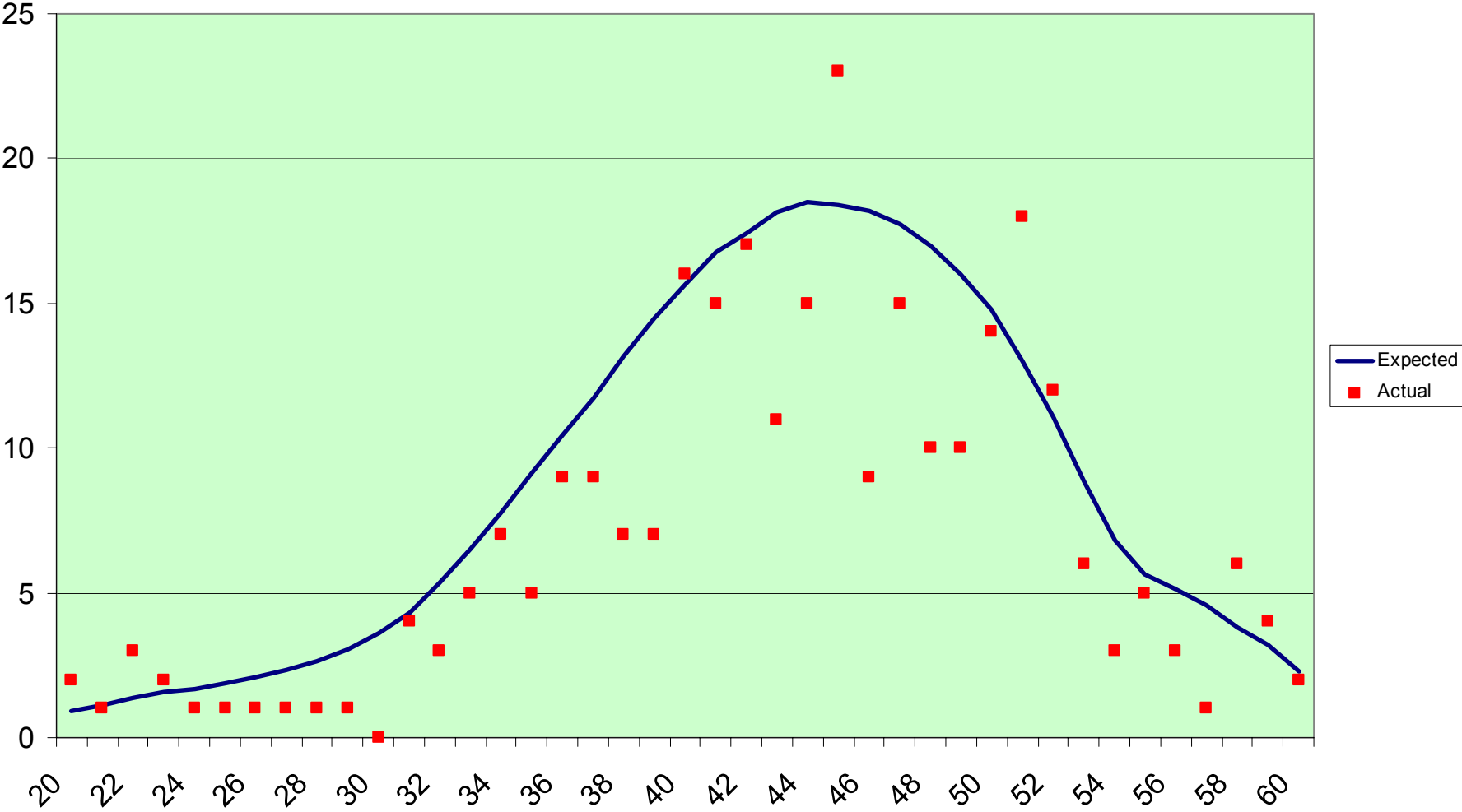
- 24 of 31 companies provided valid exposure data
- 15 of the 24 companies reported at least 10 claims for both genders
- Duration 2+, acceleration-type



Company B's Actual vs Expected (all companies) - Males

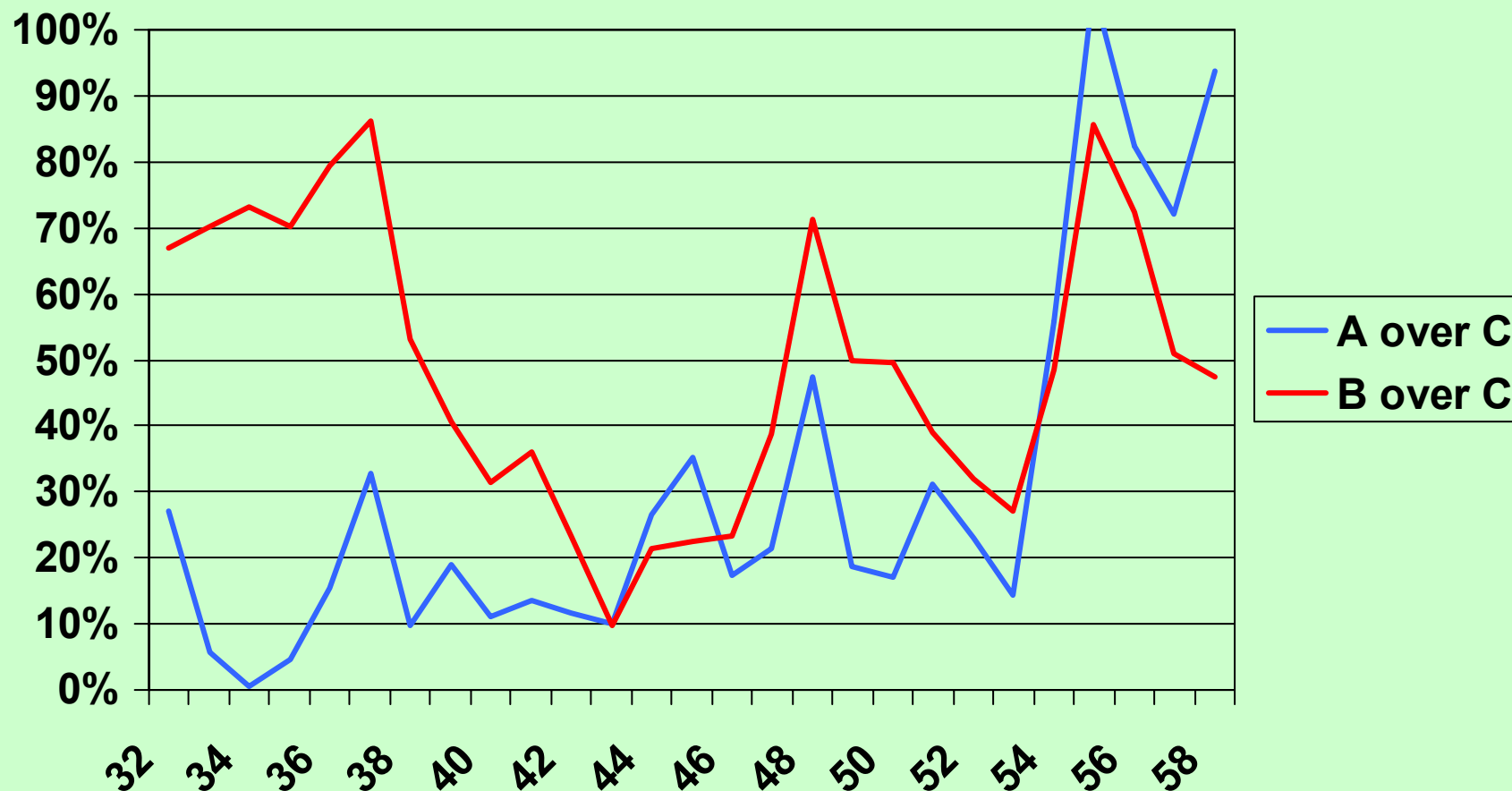


Company C's Actual vs Expected (all companies) - Males



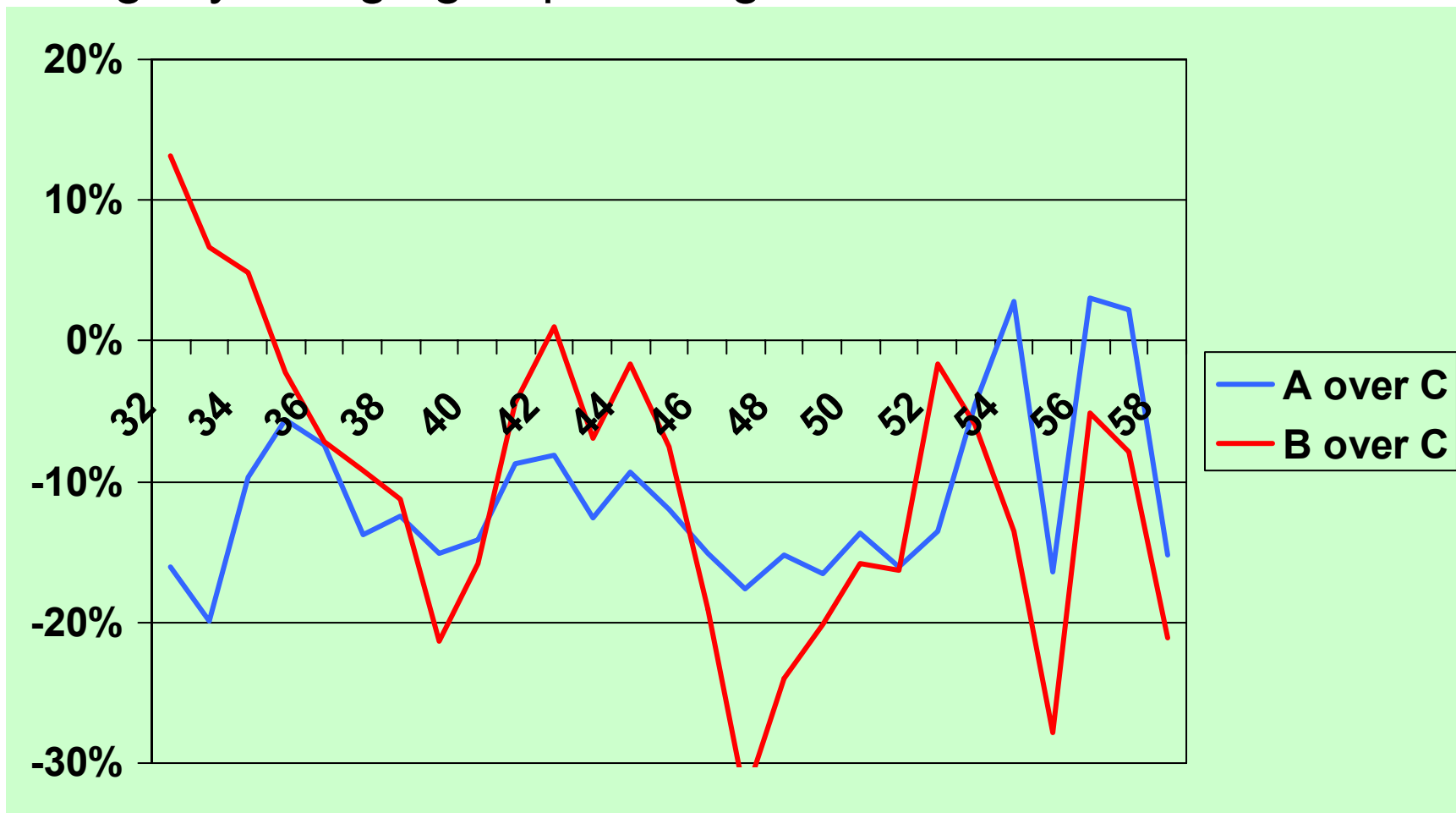
Extra Morbidity Rates over Company C - Males

using 5-year age group moving rates



Extra Morbidity Rates over Company C - Males

using 5-year age group moving rates



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For (Y)our Consideration

- Survey covers period 1996 – 2000
- What is of concern in 2004 and beyond?
 - Trend -> **negative**
 - Singapore: standard definitions introduced -> **positive but** review necessary
 - Continuous training of underwriters and claims assessors **COMET**
 - Heart Attack rates may climb due to use of more sensitive tests -> **negative**
 - Increased cancer screening amongst elderly males and younger females likely to increase claim numbers -> **negative / positive**
 - In Malaysia anti-selection risk obvious, otherwise limited positive selection -> **negative**
- Who dares to estimate a price for premium guarantees?
- Do we need to set up a deficiency reserve for existing guarantees?

For (Y)our Consideration – Our wish list

- Regular review of “standard” DD definitions
- How comfortable are you with premium rate guarantees?
 - For 10 years, 40 years or even whole life?
 - Is a separate set of definitions with stricter / clearer severity criteria necessary?
 - Reviewability of definitions (for in-force policies)
- How comfortable are we with increasing maximum sums assured?
 - Consider “per life over all policies”
- No Terminal Illness cover for Additional-type DD plans

Thank you for your attention !