

What are you really worried about?

Ian Collins
Pacific Life Re

Proposition

- Cancer is a clear consumer concern
- A fair and affordable cancer product can be made easy to buy
- This is our best chance to engage "middle" Britain with protection...
- ...opening up opportunities to meet wider protection needs



Agenda

- Cancer awareness in the UK
- UK case studies
- Lessons from around the world
- What might work in the UK?
- Questions



"The big C"

WE ARE MACMILLAN. CANCER SUPPORT

320

people of working age are diagnosed with cancer every day in the UK^(4,6,8,10)

700,000

people of working age are living with cancer(2)

40%

of all cancer survivors are unaware of the longterm side effects of cancer and its treatment⁽⁵¹⁾

97

people of working age die from cancer every day in the UK^(5,7,9,11)

1/5

of those who return to work report deterioration in job satisfaction and career prospects⁽⁵²⁾





Prostate cancer detected by dogs with more than 90% accuracy
The Independent, 11th April 2015

Cheap holidays blamed for huge rise in skin cancers

The Independent, 6th April 2015

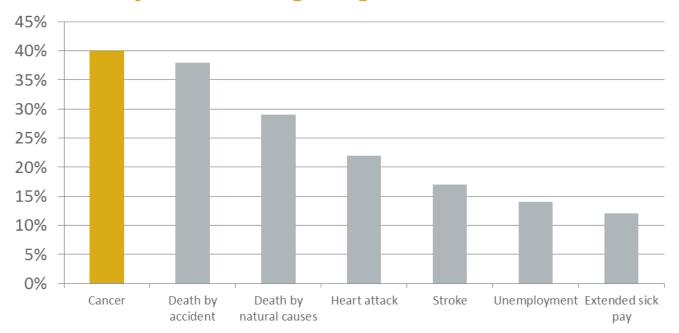
Angelina Jolie has ovaries and fallopian tubes removed

BBC News, 24th March 2015



PL Re Consumer Research

What would you consider getting insurance for...?

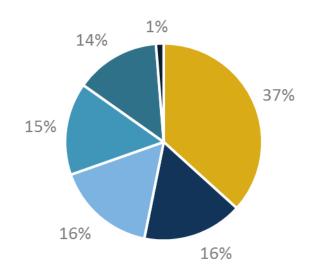


The study was conducted by ICM Research, who interviewed a random sample of 2,000 adults aged 18+ in Great Britain via an online omnibus. Fieldwork took place between 15-17th April 2014 and the results have been weighted to be nationally representative of all adults in Great Britain.



PL Re Consumer Research

What is the most common form of cancer?

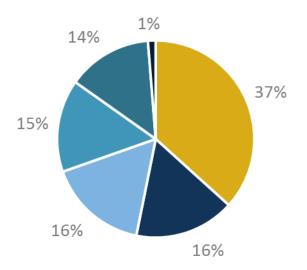


■ Breast ■ Skin ■ Bowel ■ Prostate ■ Liver/lung ■ Cervix

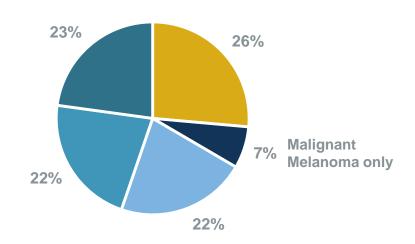


PL Re Consumer Research

What is the most common form of cancer?



Actual top 5*

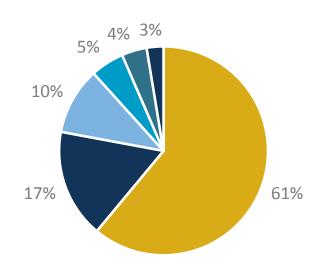


■ Breast ■ Skin ■ Bowel ■ Prostate ■ Liver/lung ■ Cervix



PL Re Consumer Research

What form of cancer do you think is the most life threatening?



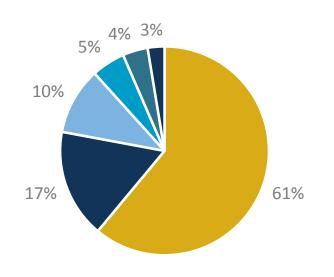
| Rank | Responses |
|------|------------|
| 1 | Liver/lung |
| 2 | Bowel |
| 3 | Prostate |
| 4 | Cervix |
| 5 | Breast |
| 6 | Skin |





PL Re Consumer Research

What form of cancer do you think is the most life threatening?



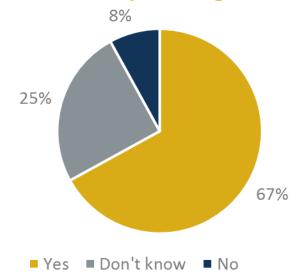
| Rank | Responses | Actual* | 1 year survival* |
|------|------------|--------------|---------------------|
| 1 | Liver/lung | \checkmark | 21% |
| 2 | Bowel | \checkmark | 76% |
| 3 | Prostate | Cervix | 83% |
| 4 | Cervix | Prostate | 94% |
| 5 | Breast | \checkmark | 96% |
| 6 | Skin | \checkmark | 97% |





PL Re Consumer Research

Do you think more people are being diagnosed with cancer now than 5 years ago?

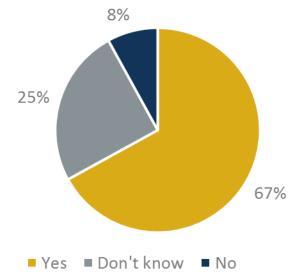




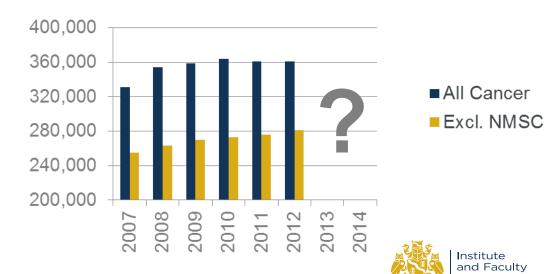
PL Re Consumer Research

Do you think more people are being diagnosed with cancer

now than 5 years ago?



New Cancer Registrations (England)



UK Case Studies

- How has the UK insurance industry met the challenge so far?
 - Critical Illness
 - Income Protection
 - Term Life incl. Terminal Illness
 - Very little else...



Virgin Money: Cancer Cover – "the big V"

- Launched January 2006 & wins Your Money award that year
 - for "tackling a taboo area without euphemism or evasion"
- Distributed by Virgin Money underwritten by Scottish Widows





- Non advised online or telephone sales
- Positioned as an affordable alternative to Critical Illness for those without any cover
- Launched during a period when CI premium rates were increasing and some providers were removing guarantees and tightening terms
- Generally hostile provider & broker reception:

"It is like insuring your car against crashing into a wall but not insuring it for driving off a cliff" Kevin Carr

"The people most likely to want to take out Virgin's cancer cover will be those who have close family members who have suffered from cancer. But unfortunately some of these people are likely to be excluded..."

Richard Verdin

Adverse market commentary

Virgin: Cancer Cover – Key Product Features

- Tiered cancer stage benefits:
 - 10% for early stage (1)
 - 25% for intermediate cancer (stage 2 vs. full CI pay-out in most cases)
 - 100% for advanced cancer (stage 3+ i.e. more severe than ABI defn.)
 - Multiple claims possible with balance paid as cancer progresses through stages
 - Death & terminal illness also covered for 100%
- 90 day initial moratorium plus "CI type" underwriting
- 5 year guarantee then reviewable premiums
- Cover from age 18 to 55 to max. expiry age 69
- Some forms of cancer excluded:
 - Non-melanoma skin cancers
 - Early forms of cervical cancer

Not "all cancers"



AIG: WellMan / Well Woman + Complete





WellWoman cancer cover

From £6.99 per month for £25,000 of cover*

It's good to know it's there

*based on an individual aged 35-39 WellWoman premier cover Direct distribution



AIG/Boots: Key Product Features

Cancers included in the cover (£12,500, £25,000 or £50,000)

WellWoman

- Breasts
- Ovaries
- Cervix
- Uterus
- Vagina
- Vulva
- Fallopian tubes

WellMan

- Prostate
- Testes
- Scrotum
- Penis

Gender targeted

Complete

- Lung
- Pancreatic
- Bowel etc.
- Carcinoma in Situ (£1,000)
- Hospital benefit (£50 pd)
- Child benefit
- Red Arc Emotional support

- Exclusions:
 - Previous diagnoses, Cancers related to pre existing conditions & 90 day moratorium
- Other Features:
 - Cover from 18 to 70 to max. expiry age 75

Non Smoker definition

Reviewable age banded premiums (2 year Non Smoker definition)



Friends Life: Group Cancer Cover



- Schemes with 50+ members (auto-cover)
- £25,000 benefit (14 day survival period + PEC exclusion)
- Support services:
 - Working Towards Wellbeing, Best Doctors & Bupa HealthLine



Lessons From Around the World

| Country | Sales | Medical cost focus | Tiered diagnosis benefits | Trend impact | Key Features |
|---------|----------------------------------|--------------------------|---------------------------------|----------------------------------|---|
| | $\checkmark\checkmark\checkmark$ | √ | × | ✓ | Cancer top CoD - bowel & smoking related trend Aflac worksite supplemental medical cost model Emerging second(ary) cancer covers |
| # # # H | $\checkmark\checkmark\checkmark$ | ✓ | ✓ | $\checkmark\checkmark\checkmark$ | Cancer top CoD – elective thyroid screening issues Market rebuilding following mass withdrawals Emerging older age segment/second(ary) covers |
| | ✓ | ✓ | × | ✓ | Aflac seeking to "repatriate" Japan model Positive encouragement to screen |
| * * | \checkmark | × | ✓ | \checkmark | Charity/research marketing tie-in "Upsell" to full critical Illness cover |
| | × | × | ✓ | / / | |



Lessons from Around the World

How is the UK different...

- NHS + established PMI market
- IFA dominance of established CI market
- "Middle Britain" not well serviced by IFA's
- Robust TCF environment
- Cardiovascular disease more significant



Lessons from Around the World

How is the UK different...

- NHS + established PMI market
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- "Middle Britain" not well serviced by IFA's
- Robust TCF environment
- Cardiovascular disease more significant

- ...and so what?
- Focus on diagnosis benefits
- Focus on direct distribution:
 - Simplify claim triggers
 - More affordable "entry level" cover
 - Clearly meet expectations on what is/isn't covered i.e. cover all cancers proportionately including 2nd diagnoses
 - Instant underwriting decisions based on basic criteria
- Scope to widen coverage later:
 - Incl. IP & CVR
 - Consider WoL cover





| Low (1x cover) | Medium (2x cover) | High (3x cover) |
|--|--|--|
| CIS | CIS + organ removal | |
| | Cancer (Stage 2) | Cancer (Stage 3+) |
| Prostate | Prostate (T1+removal or T2) | Prostate (T3+) |
| Melanoma | Melanoma (Breslow 1.5mm+) Melanoma (Clark L3+) | |
| Leukaemia Multiple Myeloma | Chronic Lymphocitic (RAI 2) Chronic Myeloid Mult. Myel. (Durie-Salmon 2) | Chronic Lymphocytic (RAI 3+) Chronic Myeloid + transplant Acute Myeloid Acute Lymphocytic Mult. Myel. (Durie-Salmon 3) |
| Non Hodgkin's Lymphoma Hodgkin's disease | Non Hodgkin's Lymphoma (Ann Arbor 2) Hodgkin's disease (AA 2) | Non Hodgkin's Lymphoma (Ann Arbor 3+) Hodgkin's disease (AA 3+) |



Pay all cancers

| Low (1x cover) | Medium (2x cover) | High (3x cover) |
|---|---|--|
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Proportionate benefits

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Proportionate benefits but seek to simplify claim triggers

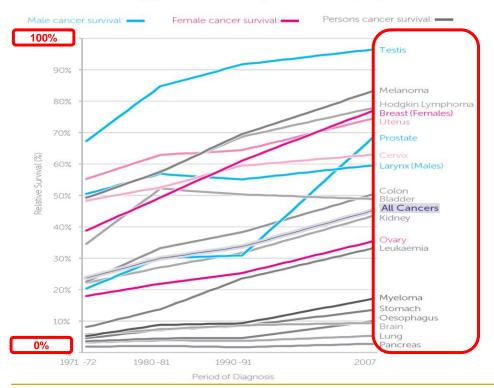
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Simplify claim triggers

Survival Trends for Selected Cancers: 1971-2007

Ten Year Relative Survival (%), Adults (15-99 Years), Selected Cancers, England and Wales



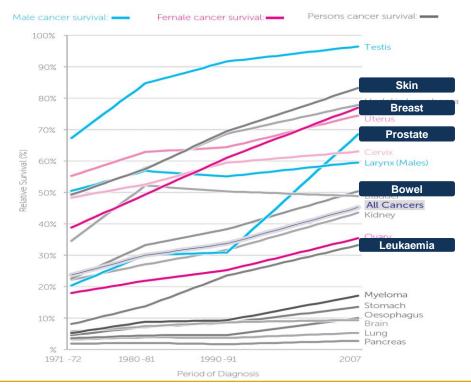
Survival probabilities vary strongly by type of cancer



Simplify claim triggers

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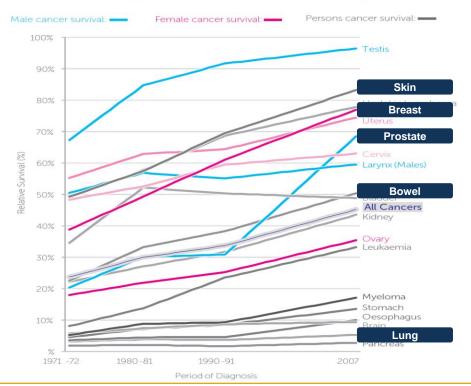
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- Strong improvements in recent years for some common causes



Simplify claim triggers

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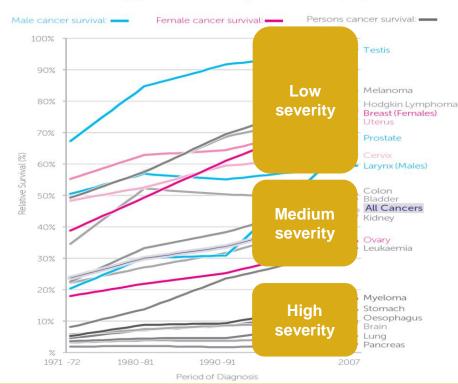
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- Strong improvements in recent years for some common causes
- Consumers have a fair understanding of the relative severity of common cancers



Pay proportionate benefits

Survival Trends for Selected Cancers: 1971-2007

Ten Year Relative Survival (%), Adults (15-99 Years), Selected Cancers, England and Wales



- Survival probabilities vary strongly by type of cancer
- Strong improvements in recent years for some common causes
- Consumers have a fair understanding of the relative severity of common cancers
- "Site" is a crude proxy for severity



All cancers



- Proportionately cover all cancers
- Including those often excluded under ABI Critical Illness severity criteria



All cancers

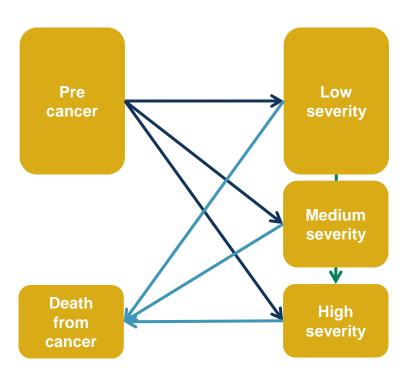
Pre cancer



- Proportionately cover all cancers
- Including those often excluded under ABI Critical Illness severity criteria
- Pre cancer screening beneficial



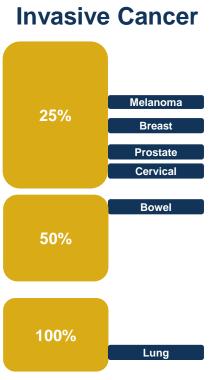
All cancers



- Proportionately cover all cancers
- Including those often excluded under ABI Critical Illness severity criteria
- Pre cancer screening beneficial
- Consumers expect cover to persist & to provide multiple payments



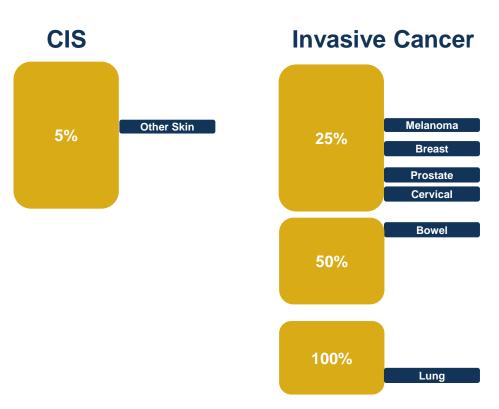
Affordable cover



- Reduced payouts for some common forms of Cancer
- Typically some of the most antiselective causes under CI



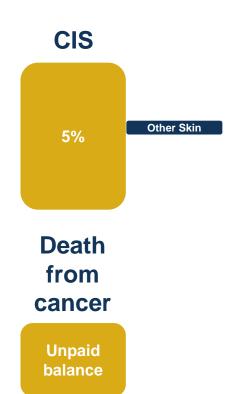
Affordable cover

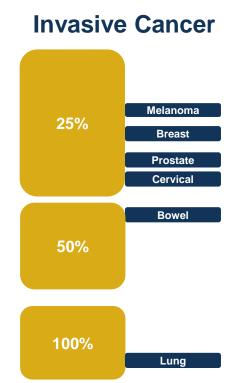


- Reduced payouts for some common forms of Cancer
- Typically some of the most antiselective causes under CI
- Nominal cover for prevalent very low severity skin cancers & CIS



Affordable cover





- Reduced payouts for some common forms of Cancer
- Typically some of the most antiselective causes under CI
- Nominal cover for prevalent very low severity skin cancers
- Death by cancer a proportionate "catch all"



Instant underwriting

- Q Scope for anti-selection surely drives need for full u/w?
- Cancer only claim causes vs. wider range for CI/mortality covers
- Key criteria:
 - Prior diagnoses
 - Incipient conditions
 - Family History
 - Lifestyle

Question (CIS/Cancer)

Short moratorium or "lumps/bumps" question

Reduced payouts for low severity/CIS

BRCA Breast/Ovarian – young age onset question

Smoking question (NS more restrictive?)

Other factors to potentially sharpen prices

A Not necessarily!



Pricing nightmare?

- Claim assumptions:
 - Leverage CI experience it is more cancer than anything else…but:
 - Impact of other CI conditions "hiding" cancer incidence
 - Impact of severity definition & condition exclusions ABI+ starting to shed light here
 - Leverage population data Cancer registrations + medical studies UK & US SEER
 - NB asymptomatic low severity forms and some skin cancers
 - Multiple claims "Longitudinal" ideal but elusive less of a concern than you may think!
 - Shorter underwriting inherently less anti-selective benefit design + reinsurer input
 - Cancer trends
 - Sensitivity to site/type of cancer vs wider more benign CI trend
 - Benefit amount weighted
 - Screening



Pricing nightmare?

- Other "stuff":
 - Persistency impact of partial claims & distribution
 - Appropriateness capital more uncertainty
 - Premium shape & guarantee appetite durable cover at a predictable price
 - Gender mix (if unisex) or offer gender targeted product?
 - Other/ancillary benefits



Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



05 May 2015

Conclusion

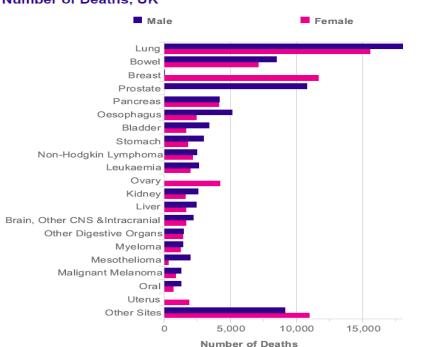
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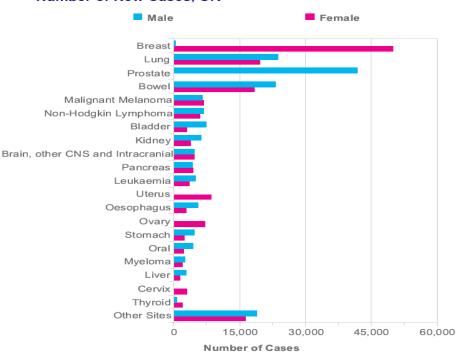
Appendix 1

The cancer landscape

The 20 Most Common Causes of Cancer Death in 2011 Number of Deaths, UK

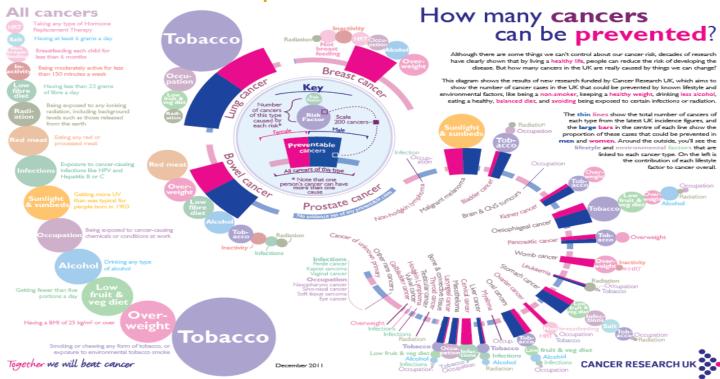


The 20 Most Common Cancers in 2011 Number of New Cases, UK



Appendix 2

The cancer landscape





Appendix 3

Lessons From Around the World

Case study detail











Japan





- Aflac are still the dominant cancer insurance provider
 - 50%* market share (99% in 1981 & 13 million policyholders at peak in 2001)
 - 10 other significant providers entered since 2001
- Roots in supplemental medical insurance in US (American Family) but Japan now dominates and cancer insurance is the key driver
- Cancer remains the top cause of death in Japan and has been since 1981 following a strong increasing trend since 1950
 - Colorectal & smoking related cancer in particular
- Substantial demand for worksite marketed insurance of supplemental medical costs
- Japan has until very recently treated cancer as a taboo topic
 - Initial barrier to sales but also caused a lack of initial competition
 - additional regulatory barriers for domestic insurers pre 2001



Japan

Recent developments

 Typical cancer products include diagnosis based benefits but have more of a hospital cash/"major medex" structure:

2nd Cancers

- Daily Hospital Cash
- Daily Outpatient Cash
- Defined Surgical Cash et al.
- Diagnosis benefit typically 100x daily Hospital Cash amount
- Usually sold on the basis of a medical questionnaire no pre existing cancer eligibility criterion
- Recent trend towards offering further payouts on second or third diagnoses subject to a "separation period" e.g. 2 years
- Some providers will cover those with prior cancer diagnoses at outset subject to sufficient elapsed time e.g. 5 years and a rating



A recovery under way?

Korea cancer insurance new business trends:

| No of new | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| policies (000's) | 1.547 | 1,404 | 1,041 | 1,039 | 800 | 650 | 520 | 520 | 600 | 700* | 800* |

- Due to poor profitability the number of providers reduced from 16 in 2003 to 6 in 2009 but some now re-entering:
 - e.g. Kyobo Life, Samsung
- Key success factors in Korea :
 - Cancer incidence rate is steadily increasing (esp. thyroid detection)
 - Public awareness of cancer has been enhanced
 - Regulators encourage insurers to develop cancer products
 - Recent focus on older age sector









SAMSUNG

Silver Cancer Insurance

- Basic tiered cover for cancer diagnoses (max. KRW 20m*):
 - 20% for prostate cancer
 - 40% for "minor" cancers: incl. breast, cervix, endometrial, bladder
 - 100% for other cancers
- Optional additional covers:
 - 10% for "pre cancer": CIS, thyroid & intramucosal colo-rectal cancer & "other" skin (non melanoma)
 - +50% for specified types: stomach, liver, lung
 - +100% for "high cost" cancers incl. pancreas, bone, brain & leukaemia
 - 100% for death by cancer* (up to age 80)
- 10 year renewable: entry age 61 to 75 to max. expiry age 100
- Face to face agency distribution









AFLAC CANCER CARE

SPECIFIED-DISEASE INSURANCE

Policy NY78400



Added Protection for You and Your Family

Chances are you know someone who's been affected, directly or indirectly, by cancer. You also know the toll it's taken on them-physically, emotionally, and financially. That's why we've developed the Aflac Cancer Care insurance policy. The plan pays a cash benefit upon initial diagnosis of a covered cancer, with a variety of other benefits payable throughout cancer treatment. You can use these cash benefits to help pay out-of-pocket medical expenses, the rent or mortgage, groceries, or utility bills-the choice is yours.

And while you can't always predict the future, here at Aflac we believe it's good to be prepared. The Aflac Cancer Care plan is here to help you and your family better cope financially—and emotionally—if a positive diagnosis of cancer ever occurs. That way you can worry less about what may be ahead.

HOW IT WORKS



Policyholder suffers from frequent infections & high fevers.

Physician visit & bone marrow biopsy reveals diagnosis of leŭkemia.

AFLAC CANCER CARE -PREMIER insurance policy provides the following:

\$40,925 TOTAL BENEFITS

Premier Cancer Care Benefit Overview

BENEFIT NAME

BENEFIT AMOUNT

Concer Wellness Benefit

\$100 per year, per Covered Person

Cancer Diagnosis Benefits

Insured/Spouse: \$6,000; Dependent Child: \$12,000; payable once per Covered Person \$200; two payments per year, per Covered Person; no lifetime max

\$150 per month; no lifetime max

\$300 per day; no lifetime max

\$150 per day: no lifetime max

\$900 per day: limited to one payment per week; no lifetime max

\$500 per day; limited to one payment per week; no lifetime max

\$500 once per month: \$2,500 lifetime may per Covered Person

exceed \$6,250; no lifetime max on number of operations

\$150 a day, limited to 30 days per year, per Covered Person

\$250 per occurrence; lifetime max \$500 per Covered Person

\$75 per day; lifetime max of 100 days per Covered Person

\$50-\$600; no lifetime max on number of operations

\$10,000: \$10,000 lifetime max per Covered Person: \$1,000 to donor

\$10,000: lifetime max \$10,000 per Covered Person

\$400 per day up to \$1,200 max per month for Oral/Topical Benefit²

\$200 per prescription, per month up to \$1,200 max per month for Oral/Topical Benefit²

\$500 per week outside of a clinical trial; \$125 per week as part of a clinical trial; no lifetime max

Inpatient: \$150 times the number of days paid under the Hospital Confinement Benefit; Outpatient

\$300 (payable in addition to Surgical/Anesthesia Benefit); no lifetime max on number of operations

\$1,000 for the 1st day; \$50 per day thereafter; \$12,000 lifetime max per Covered Person

\$350-\$3,000 (Anesthesia: 25% of Reconstructive Surgery Benefit); no lifetime max

\$1,500 to have occytes extracted; \$500 for storage; \$2,000 lifetime max per Covered Person

\$150-\$5,000 (Anesthesia: additional 25% of Surgical Benefit): maximum daily benefit not to

Medical Imaging With Diagnosis Benefit NCI Evaluation/Consultation Benefit \$1,000 payable only once per Covered Person

Cancer Treatment Benefits

Injected Chemotherapy Benefit Oral Chemotherapy Benefit Topical Chemotherapy Benefit Radiation Therapy Benefit

Experimental Treatment Benefit Immunotherary Renefit Antinausea Benefit Stem Cell Transplantation Banefit

Bone Marrow Transplantation Benefit Blood and Disema Renefit

Surgical/Anesthesia Benefit Skin Cancer Surgery Benefit

Additional Surgical Opinion Benefit

Outpatient Hospital Surgical Room Benefit Continuing Care Benefits:

Extended-Care Facility Benefit Home Health Care Benefit Hospice Care Benefit

Nursing Services Benefit Surgical Prosthesis Benefit Nonsurgical Prosthesis Benefit Reconstructive Surgery Benefit

Egg Harvesting and Storage (Cryopreservation) Benefit

Ambulance, Transportation, Lodging, and Other Benefits:

Transportation Benefit Lodging Benefit Bone Marrow Donor Screening Benefit \$250 ground or \$2,000 air; no lifetime max \$.50 per mile: max \$1.500 per round trip: no lifetime max

\$3,000; lifetime max \$6,000 per Covered Person

\$80 per day; limited to 90 days per year \$40: limited to one benefit per Covered Person, per lifetime







US Premier Cancer Care



- Cancer Wellness
 - Up to \$100 pa for various screening interventions
- **Cancer Diagnosis**
 - \$6,000 lump sum for Internal Cancer or Associated Cancerous Condition
 - \$200 imaging diagnosis & \$1,000 NCI evaluation/consultation benefits
- Cancer Treatment
 - \$150 pm to £10,000 range of periodic treatment specific payments
- Hospitalisation
 - \$300 pd inpatient/outpatient benefit
- Continuing Care benefits
 - \$75 pd to £12,000 range of periodic care & rehab specific payments
- Ambulance, Transportation, Lodging & Other benefits
 - \$0.50 per mile etc.

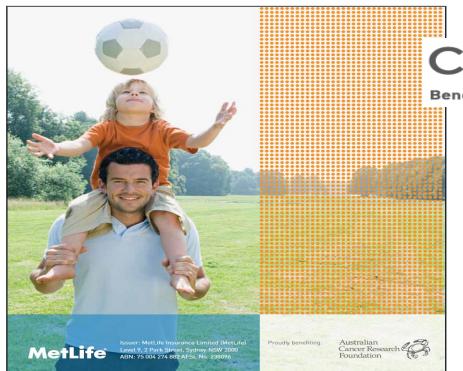






MetLife

Cancer Care





Benefiting the Australian Cancer Research Foundation





MetLife

Cancer Care Additional Benefits etc.

- 4 levels of cover:
 - AUD 25,000, 50,000, 75,000 & 100,000
- Cancer Care Plus:
 - Coverage (1x cover) for 22 additional non cancer "CI" conditions
- 10% of each premium donated to ACRF
- Automatic inflation linked cover (max CPI, 5% with opt out)
- Premiums:
 - Gender, & age specific with 3 year Non Smoker definition
 - Reviewable YRT premiums (cover non cancellable)
- Cover from age 18 to 55 to max. expiry age 65
- Exclusions include;
 - Other skin cancers, initial 90 day moratorium & sudden deaths



Tighter Non Smoker definition

