

# HIV/AIDS – Insuring the "uninsurable"

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SWISS RE  
**150**  
YEARS

# Agenda

- Background & Drivers for change; political pressure v data
- Evidence base and latest study
- HIV and Life Assurance
- Claims
- Future developments
- Summary

# Background & drivers for change



## Considerations for life insurance

- Rate of loss must be predictable
- In response to increasing fears of a global AIDS epidemic, insurers tightened their underwriting practices
- Relevance of DDA Laws:
  - information used to be relevant to risk assessment
  - source on which reasonable to rely
  - accurate actuarial, statistical data, medical knowledge (EU draft)
- Sensitive issues such as HIV and genetics have been key catalysts in turning these themes into key regulatory issues for insurers
- Global trend toward regulatory developments that govern how insurers assess risk

## Reactions

- Prevent anti-selection/underwriting
  - initially 'lifestyle' questions or separate questionnaire; standardisation
  - code of conduct (testing)
  - HIV testing in NMLs
- Exclusions
  - to prevent potential surge in claims and to manage premiums better
  - difficult to manage
  - still exist today, enforcement problems, complaints
- Pricing adjustments
  - underwriting and tests are not perfect
  - large initial adjustments eroded over time

# Global pressures

## France

- French Belorgey agreement to facilitate access to insurance for people with "increased risk for their health" (September 2001)
- People with increased health risk can more easily access life insurance under a loan
- Aim of the convention:
  - create pools for sub-standard lives insuring uninsurable lives
  - cover must be provided for all risks, including HIV
- Consequence of the AERAS convention:
  - obligation to accept all risks, with no questions asked, where proposer < 50 years, term < 4 years and EUR 15,000 max, ratification Dec 2006

## Netherlands: concern regarding public screening programs

- fear of uninsurability leads to pressure on Govt and insurers
- WMK: Medical Examinations Act, prohibiting examinations for insurance
- data in 'The Lancet' (more later), that HIV positive lives are insurable
- debate in parliament persuades insurers need to act
- support from patient groups, media
- secures acceptance of risk assessment process

## South Africa: strong political pressure on market

- initially HIV positive offered mainly via specialist providers
- managed product (regular follow up) with reviewable rates

## UK: ABI Statement of Best Practice 1994 and 2004





**Evolving evidence base**

# Landmark publication - Jaggy et al 2003

Investigated cohort:

- Switzerland
- Observation period 1997-2001
- Comparison with mortality of the Swiss population

	Hepatitis-C negative		
	Patients (follow-up years)	Deaths	EDR (95% CI)
<b>All</b>	2318 (7598)	134	14.0 (11.3–17.2)
<b>Successfully treated patients</b>			
CD4 >250 (cells/ $\mu$ L)	1567 (4498)	35	4.2 (2.0–7.2)
CD4 >250 (cells/ $\mu$ L), and viral load <400 (copies/mL)	1281 (3594)	25	3.4 (1.1–6.7)
CD4 >250 (cells/ $\mu$ L), and viral load >400 (copies/mL)	274 (861)	10	8.0 (2.7–17.6)
CD4 >250 (cells/ $\mu$ L), and viral load <400 (copies/mL), but CD4 nadir <250 cells/ $\mu$ L before HAART	545 (1564)	11	3.1 (0.0–8.6)
<b>Patients with unsuccessful treatment</b>			
CD4 count never >250 cells/ $\mu$ L	257 (620)	76	117.4 (93.9–145.6)

**Excess death rates (EDR) per 1000 patient-years in Swiss patients of the SHCS, 1997–20**

Lancet 2003; 362: 877–78

ART increased life expectancy for HIV-infected individuals

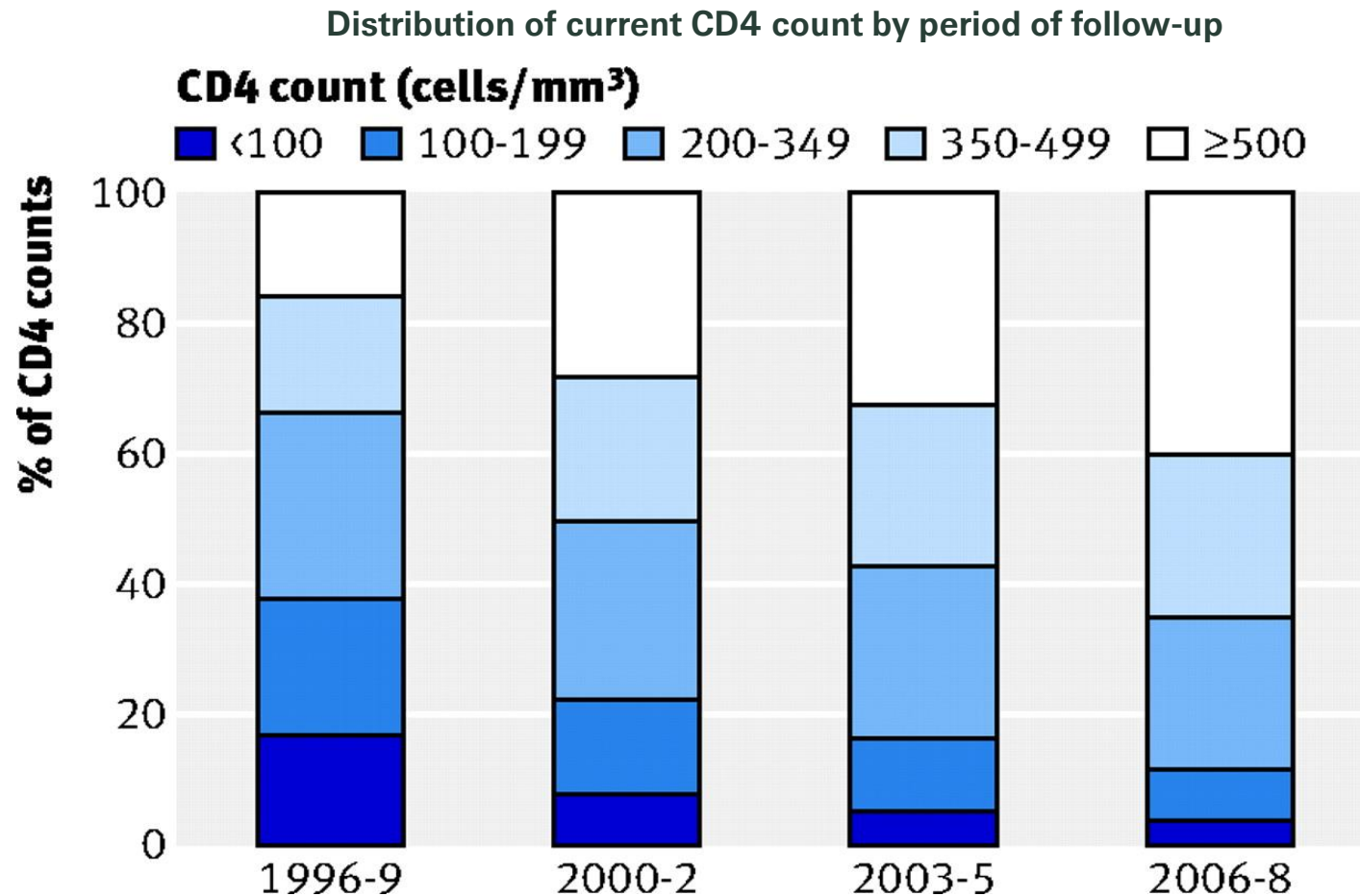
**An HIV-infected 20-year-old appropriately treated with ART can expect to live to >69 years in high-income countries**

**Life expectancy of individuals on combination antiretroviral therapy in high-income countries: a collaborative analysis of 14 cohort studies**  
Antiretroviral Therapy Cohort Collaboration ART-CC

The Lancet, Volume 372, Issue 9635, Pages 293 - 299, 26 July 2008



# BMJ study: Impact of late diagnosis and treatment on life expectancy in people with HIV-1: UK Cohort



May M et al. BMJ 2011;343:bmj.d6016

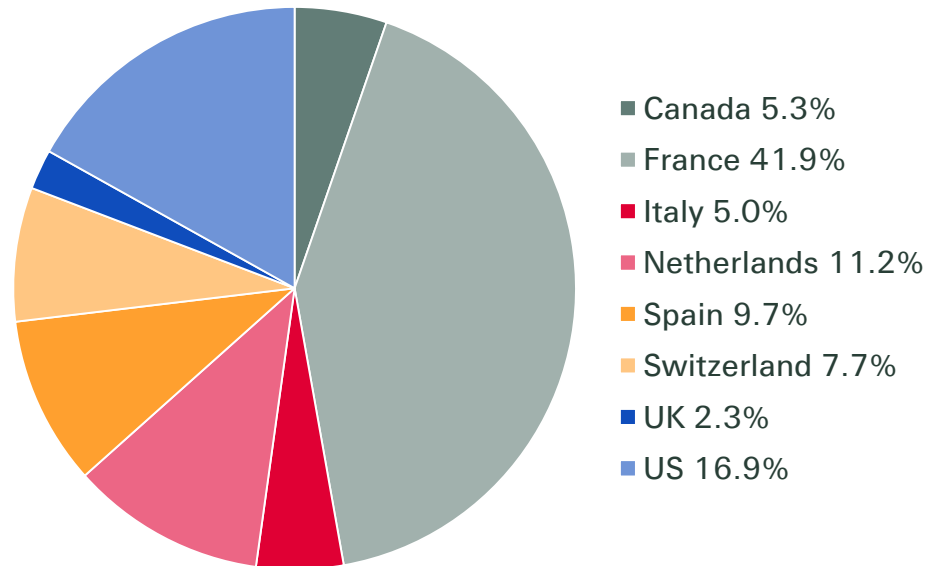


# Latest study

*With thanks to Urs Widmer, Wayne Dam and  
Josee Kaulich-Bach*

## Expansion of the Jaggy et al. study

- Original cohort
  - Switzerland
  - original study 1997-2001
  - $\pm 25$  'insurable' deaths
- Expanded study
  - based on the ART-CC database
  - 17 cohorts in 8 countries
  - longer period of analysis – 1997-2008
  - over 55 000 patients with known CD4+ count and viral load count at 6 months after starting ART
  - $\pm 600$  'insurable' deaths
  - generalized linear model (GLM) analysis relative to insured population



## Gender, HAART use, Hep C, intravenous drug use, CDC status Profile

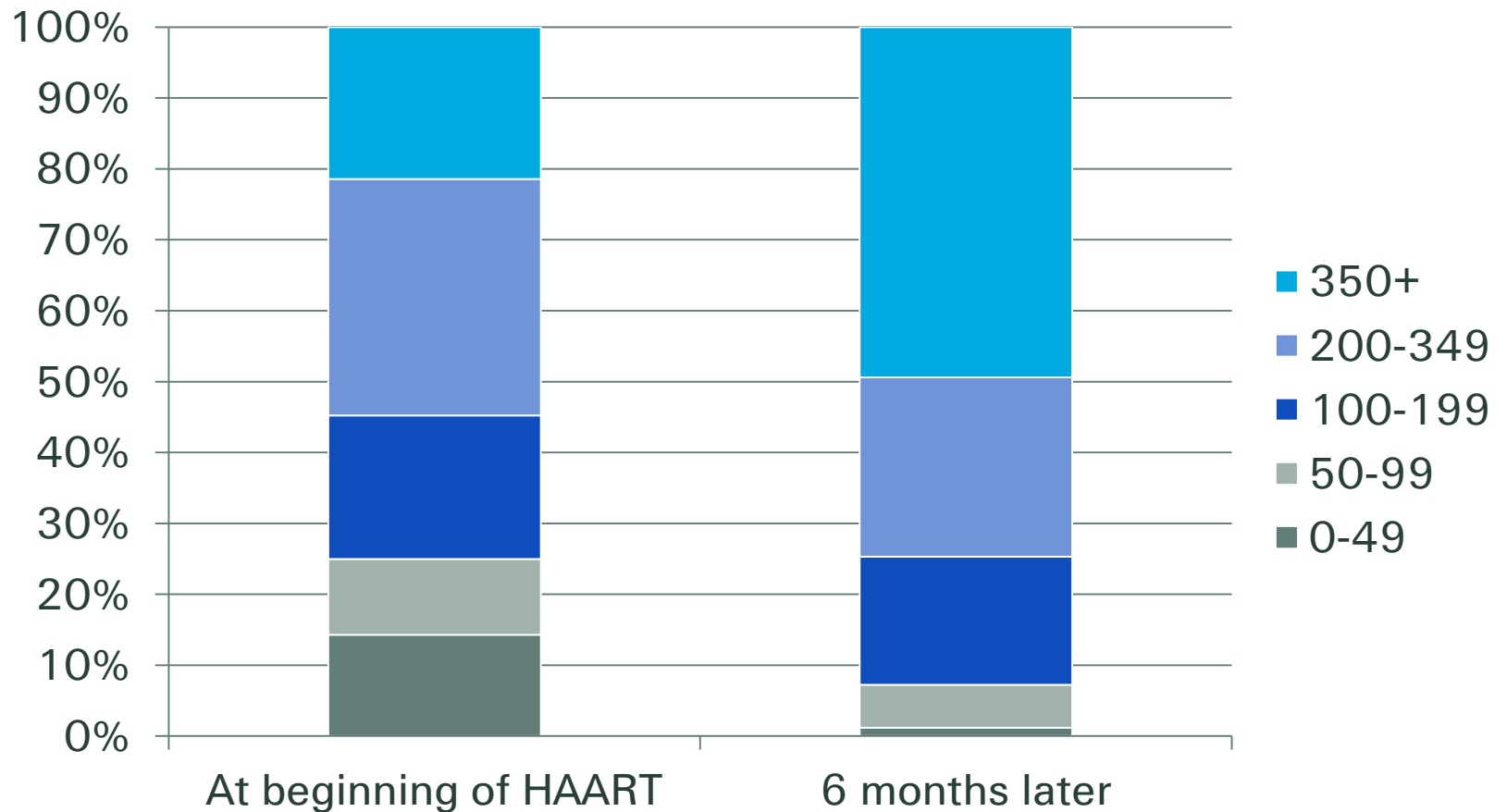
Risk Factor	Category	Patient numbers	%
<b>Gender</b>	Female	10,508	25
	Male	32,758	75
<b>Age beginning HAART</b>	15-29	7,830	19
	30-49	28,882	68
	50 up	5,754	14
<b>Hepatitis C</b>	No	29,448	70
	Yes	5,690	13
	Unknown	7,128	17
<b>IV drugs</b>	No	36,625	87
	Yes	5,641	13
<b>CDC Status</b>	A/B	33,045	78
	C	9,221	22



- Excluded data sets from North America
- Excluded idu and stage C, include hep C negative or unknown
- Expected claims against insured risk population
- Ratings to differ by CD4 category, number of years on HAART, policy term and age at issue IF meet criteria to accept
- Extend to 25 years – extrapolation - negative compound trend included
- Maximum rating cut-offs apply

*Antiretroviral Cohort collaboration (Kaulich-Bartz et al, 2013)*

## CD4 counts at the start of HAART therapy and 6 months later





## Outcome of Antiretroviral Cohort collaboration (Kaulich-Bartz et al, 2013)

- Since 1996, improvements in combination antiretroviral therapy (ART) led to improved prognosis and better adherence to treatments (single pill)
- Rates of mortality drastically reduced where no co-infection with Hep C
- Significant proportion of HIV positive individuals experience similar mortality to those with other conditions requiring lifelong treatment (DM)\*
- Concludes: long-term effectiveness of ART implies life insurance with duration to cover a mortgage is feasible for many HIV positive people:
  - successfully treated with ART
  - duration > 6 months

\*Zwahlen et al, 2009

**Insurability of HIV positive people treated with antiretroviral therapy in Europe: collaborative analysis of HIV cohort studies**

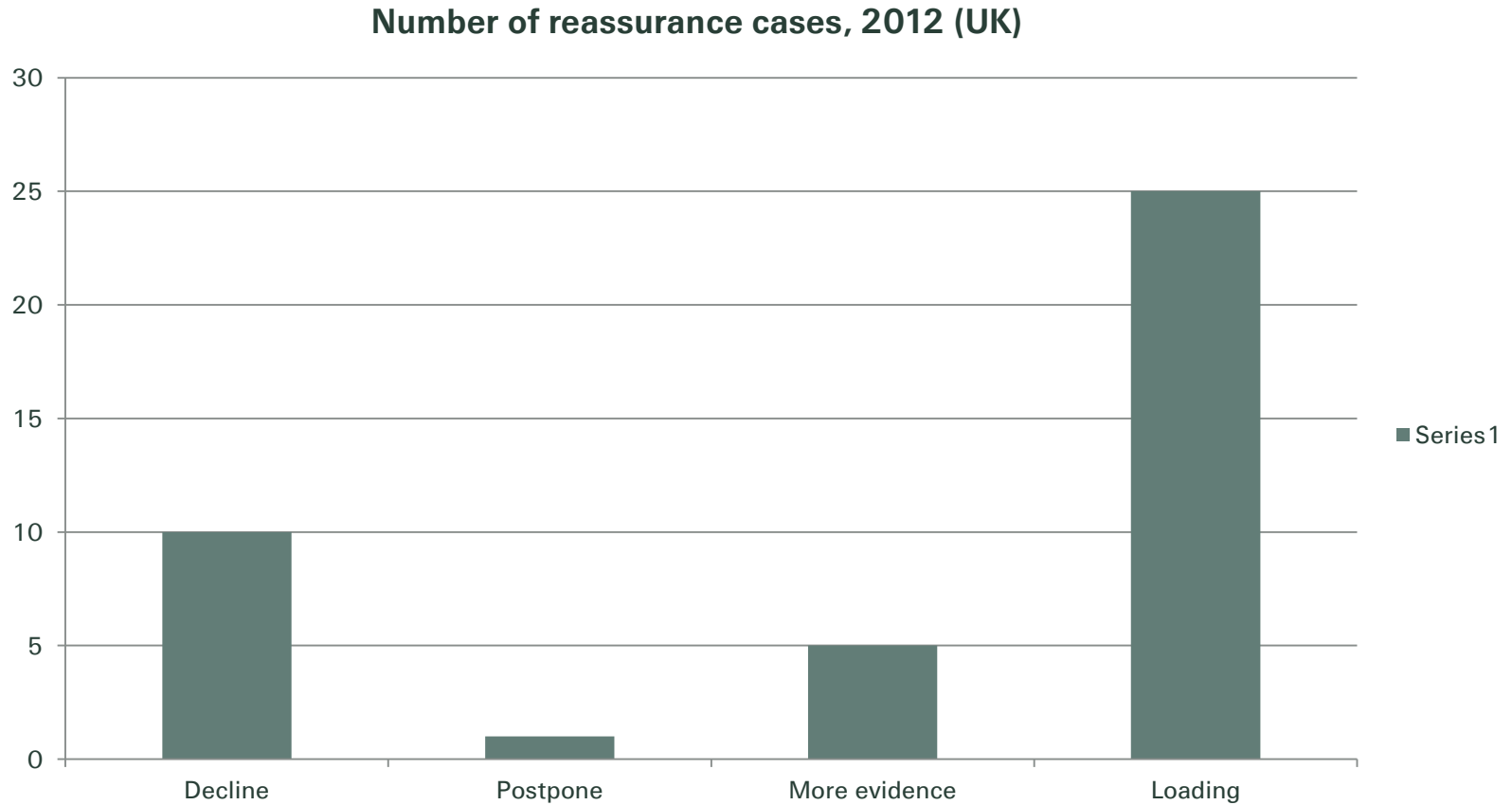
# Summary of Antiretroviral Cohort collaboration (Kaulich-Bartz et al, 2013)

- Wide range of outcomes
  - from near normal ( $\sim 1x$ ) to  $200x +$  normal mortality
  - significant portion within the insurable range
- All other things being equal
  - high CD4+ count have better outcomes
  - lower viral loads have better outcomes
  - CDC stage C (as opposed to A or B) have worse outcomes
  - no idu
  - later years HAART initiation have somewhat better outcomes
  - gender appears not significant (already in base insurance rates)
  - regional variation (Canada and US mortality rate experienced in excess)

# HIV and Life Assurance

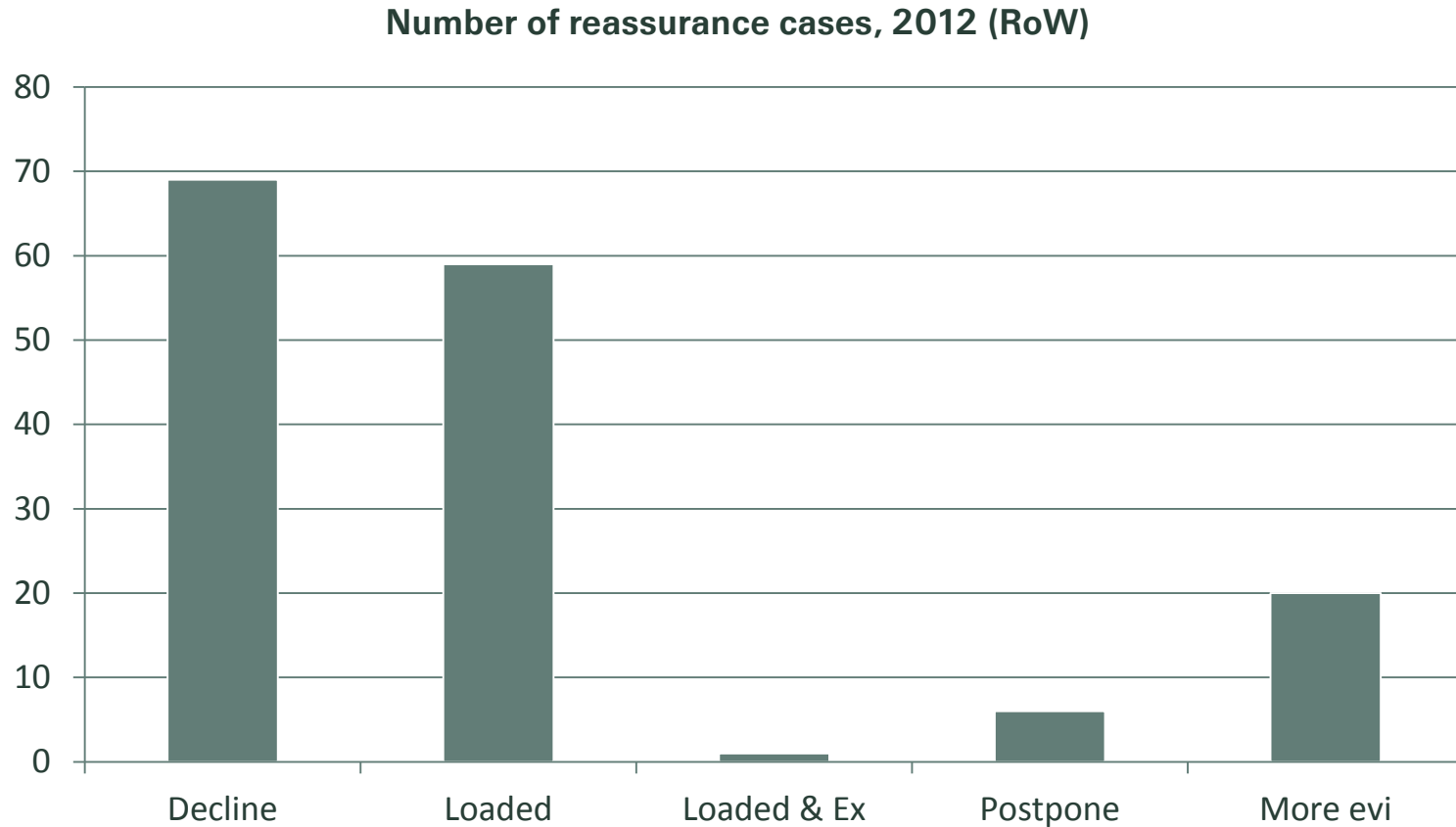


## Case count – HIV +ve Lives, 2012, UK



Total case count, 2012 = 41, Swiss Re UK

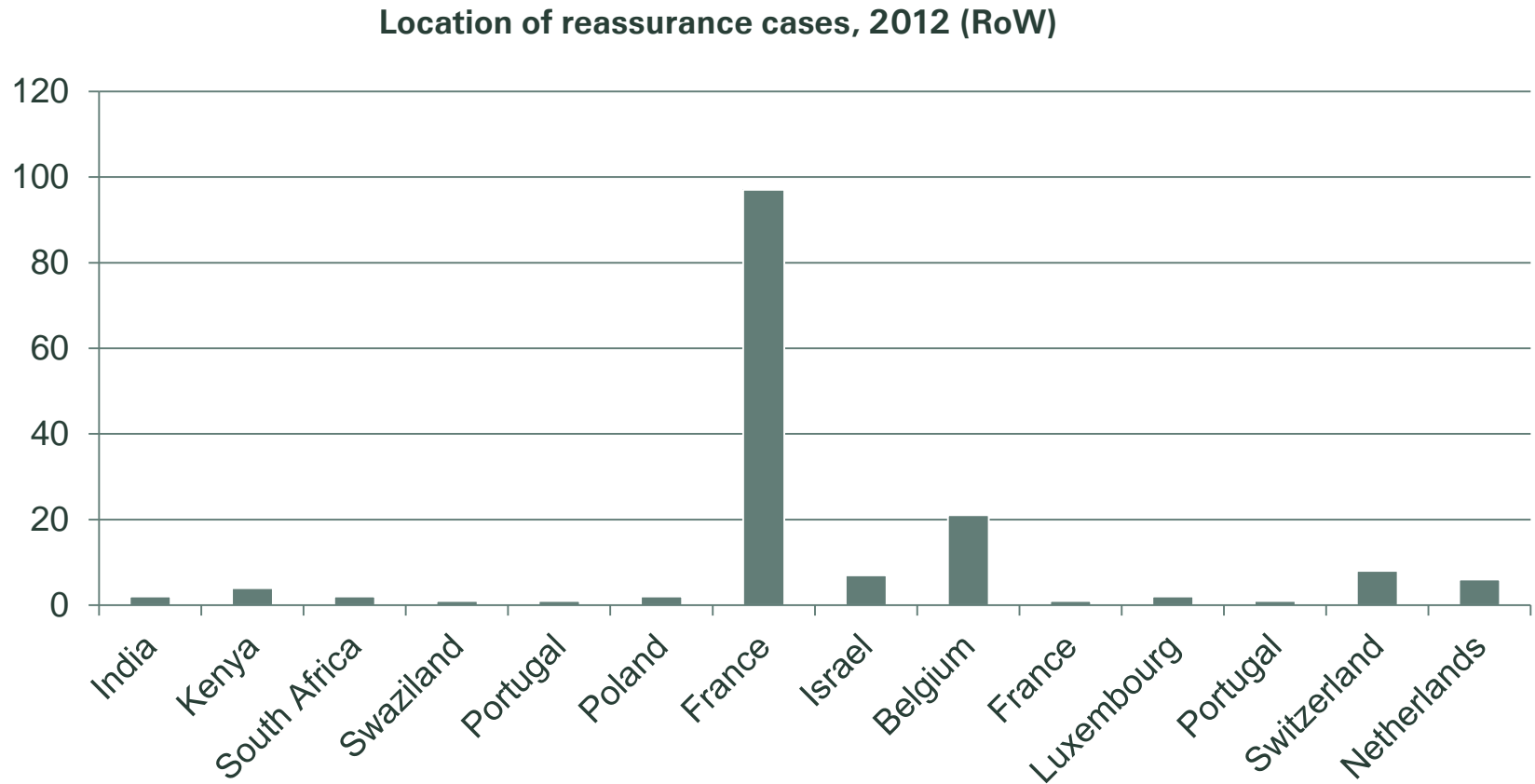
## Case count – HIV +ve Lives, 2012, RoW



Total case count, 2012 = 155, Swiss Re Zurich



## Location of case – HIV +ve Lives, 2012, RoW



Total case count, 2012 = 155, Swiss Re Zurich

An aerial photograph of a massive concrete dam. The dam's surface is composed of large, light-colored concrete panels. A wide, flat concrete walkway runs along the top of the dam, bordered by a metal railing. Two small figures of people are visible on the walkway, providing a sense of scale. To the right of the dam is a deep blue body of water. The word "Claims" is overlaid in the bottom left corner.

# Claims

## Financial services

- A recent report by unusual risks (2014) into the financial needs of the HIV community showed:
  - 23% of HIV +ve lives have some form of Life Assurance, of which 58% policies were taken after the introduction of HIV life assurance in May 2009
  - 70% policies in connection with a mortgage, 30% are for family protection
- SR UK Adjudicated Claims data (limited):
  - since 2004, adjudicated claims only average £75,625 life cover
  - oldest age of claimant 70, youngest 38 years old
  - shortest duration in force 7 months
  - highest claim £320,000

# Claims

- GIP case:
  - Age 45 in scheme since 1998
  - HIV +ve found on routine check, advises infected by ex-partner
  - Jan 2013; CD4 303 viral load 65,000, in Jul13 475 viral load 135
  - on AR
  - has co-morbid anxiety/depression, somatising disorders
  - has incentive to return to work
  - VALID claim

*Please note: anonymous and not referring to confidential information*

# Claims

- Critical illness:
  - policy effected in 2003
  - client diagnosed with HIV+ in Aug 2008 and in Feb 2011 he was found to have a large mass in the left groin
  - histology report confirming a diagnosis of Kaposi sarcoma (KS), appears HIV-related.
  - diagnosis of KS which would fulfil the cancer definition other than being 'in the presence of HIV' - therefore falling within that exclusion.
  - no anti selection, or non-disclosure
  - exclusion was there to manage uncertainty at the time and industry removed it when believed that the risk was insurable
  - cannot see why we could not pay from a legal perspective
  - payment is in the spirit of the contract on this case, even if it is outside the 'small print'.

*Please note: anonymous and not referring to confidential information*



# Dispute

- Life cover with HIV exclusion:
  - case being pursued in the Human Rights Commission (Australia)
  - policy excludes the 'payment of a benefit if caused directly or indirectly by AIDS', issued in 2001
  - policy designed and first commenced to be sold in January 1991. Application was limited to 4 questions that covered smoking, medical, pastimes and any intended medical consultations in the future
  - was a clear different pricing base for an HIV exclusion life policy alongside one that covered HIV?
  - any 'know your customer' or factfind information indicating why the applicant chose this policy type above others?
  - considerable change in outcome over this period demonstrated in mortality data
  - decision to waive this exclusion going forward

# Annuities

- Long term risk also borne out in longevity rates
- Number of HIV +ve lives also seen in our UW annuities book
  - Males and Female lives
  - Age range 51 to 67
  - All on ART
  - Earliest diagnosis date 1983, latest 2 months prior to quote
  - Many have other co-morbidities including KS
  - Fund sizes vary highlighting the increase in length of time in work (range of occupations, income also noted)
  - in general small reductions to LE made to reflect improvements



# Future developments

## Future...?

- New HIV tests (4<sup>th</sup> Gen), to allow for earlier intervention at time of maximum transmission risk and earlier care
- Wider testing:
  - Thames Valley Positive Support (TVPS) perform tests in Tesco Extra in order to "normalise" HIV testing, in Slough
  - 'The Time to Test' project will run on a weekly basis for six weeks
- Simpler care management tests, for greater self-care and control
- 'Functional' cure: virus continues to be present, however no antiretroviral therapy needed for viraemic control
- Further challenges for L&H insurance providers...?

## Data review based on 2013 study

- 17 cohorts with HIV-infected patients on antiretroviral therapy (ART) from 8 countries
- Initially, approximately 55,000 patients with CD4 and viral load measurements, undergoing regular follow-up, observed over 10 years
- Data based upon European cohorts, so new guidelines applicable to European applicants
- This review importantly showed that for select individuals who are HIV positive:
  - life cover for a term of up to 25 years is possible for best cases
  - in applicants under age 45 years
- Rating groups based upon duration of HAART treatment, split between year attained of treatment and round CD4 levels, being a proven key prognostic indicator



# Where are we?

- Ideally
  - offer exactly the same product as the rest of the market globally
  - ratings in a similar format to other diseases or impairments
  - similar guarantees
  - whole of life ideal but longer term to back mortgages
- Where we are
  - standard product with updated loadings for certain markets
  - 25 year term for best cases (ages)
  - whole of life with reviewable rates (only in some markets)
- Getting there...what about other products, health cover...?

# Thank you

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