EuroCoord

SEVENTH FRAMEWORK PROGRAMME

a multicentre study

EuroSIDA

14th European AIDS Conference/EACS

Infection related and unrelated malignancies, HIV and the aging population

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On behalf of EuroSIDA in EuroCOORD

17th October 2013

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Background

ART ⟶ Longer survival ⟶ Aging population

Malignancies

- chronic immune deficiency (Infection related)
- older age (Infection unrelated)

Future planning, treatment and prevention

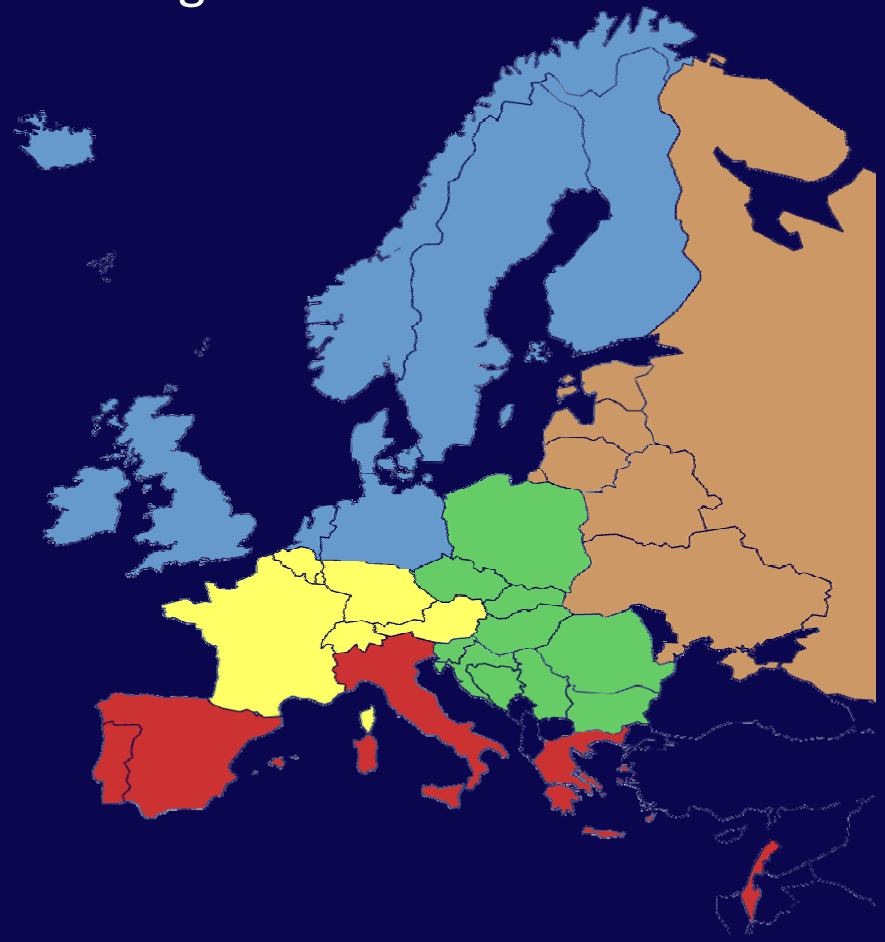
Aim

To investigate the impact of aging in the HIV-positive population on the incidence of infection related and infection unrelated malignancies

[1]Kowalska JD, Epidemiology 2011

Methods - EuroSIDA

EuroSIDA is a large prospective cohort with 18,791 patients from 108 clinics in 34 European countries, Israel and Argentina. Regularly collecting:



- CD4 counts, HIV viral loads
- All treatment start/stop dates
- Clinical AIDS events
- Non-AIDS events (since 2001)
- Deaths and causes of death[1]
- Smoking status

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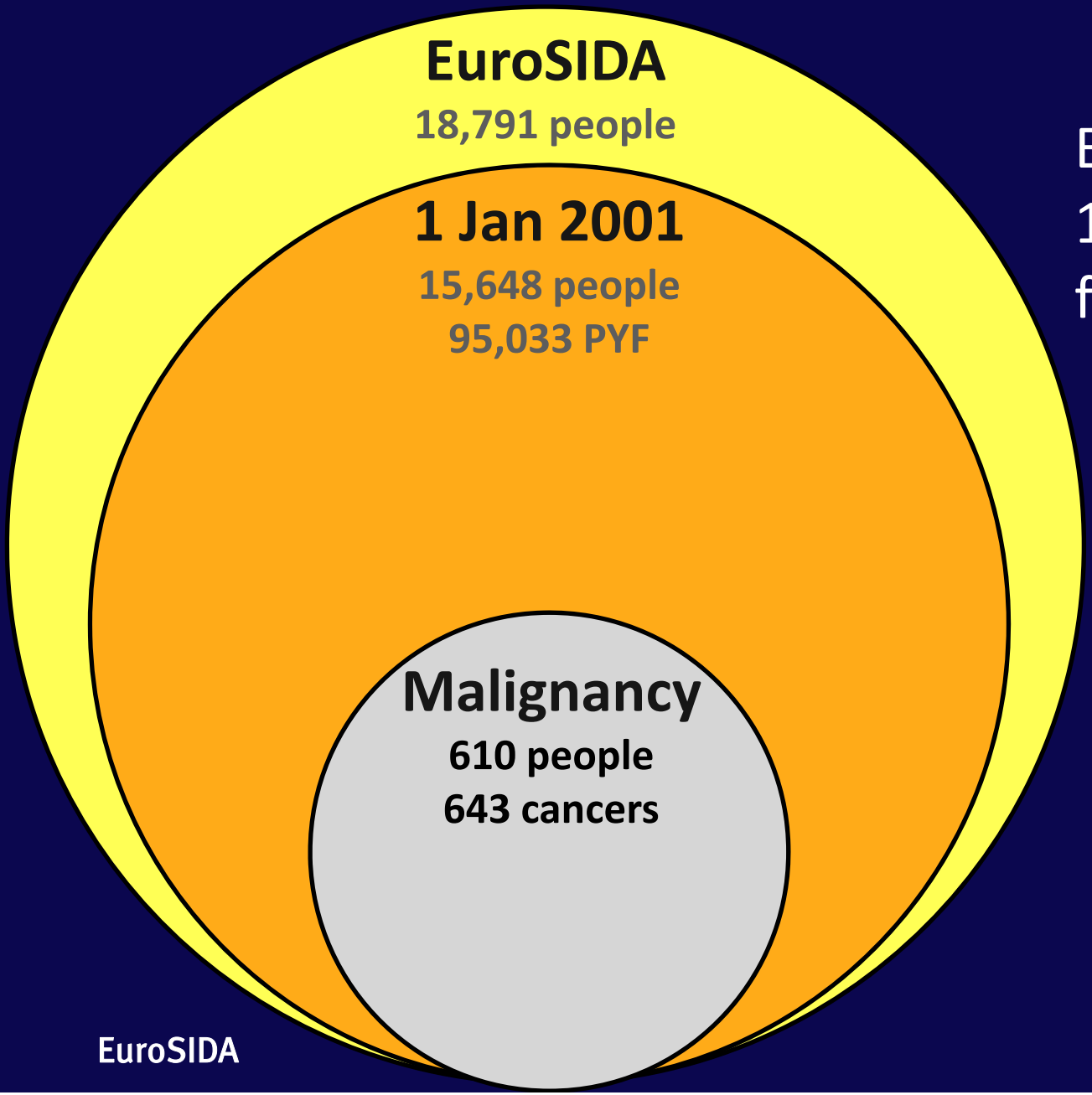
Methods - EuroSIDA



Baseline: latest of 1 January 2001 or first visit

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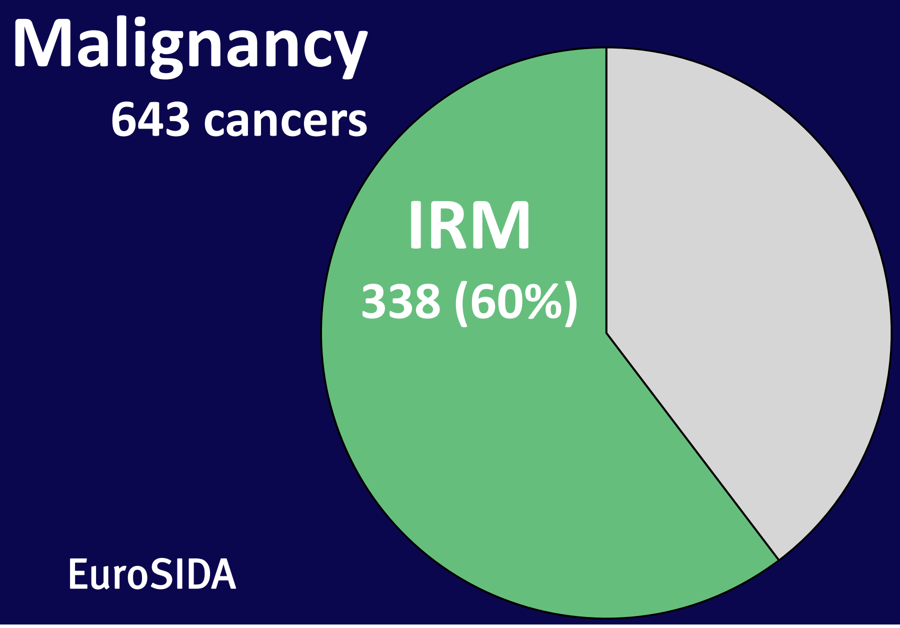
Methods – Infection related malignancies

Clear infectious cause N (%)

- EBV 159 (41)
- HPV Males 81/307 (26), Females 42/81 (52)
- HHV-8 62 (16)
- *H.Pylori 11 (3)* Cervix, anus, penis, vulva, vagina, base [illegible]
- HCV/HBV 33 (9) of tongue, pharynx, tonsils [illegible]



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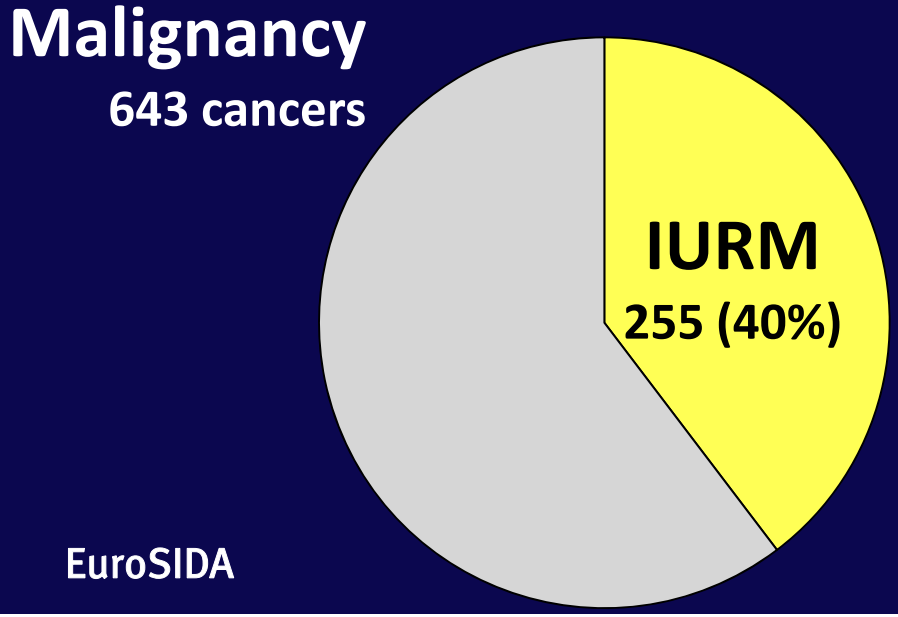
Methods – Infection unrelated malignancies

No clear infectious cause N (%)

- Lung cancer 55 (22)
- Prostate cancer males 28/202 (14)
- Breast cancer females 26/53 (49)
- Colon and rectal cancer 23 (9)



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Methods - Statistics

Annual incidence rates, stratified by age

Poisson regression

Linear exponential smoothing models (LESMs)

Baseline Characteristics (latest of 1 January 2001 or first visit)

	N/Median	%/IQR
Total	15,648	100
Aged 51 or older	2,502	16
Prior malignancy	931	6
Male	11,356	73
White ethnicity	13,821	88
Region		
Argentina	597	4
East	4,774	30
West	3,220	21
North	3,332	21
South	3,725	24
Risk group		
Heterosexual	5,008	32
IDU	3,381	22
Homosexual	6,124	39
Current or previous smokers	5,454	35
CD4 (cells/mm)	410	265-588
HIV Viral Load (copies/ml)	123	495-200

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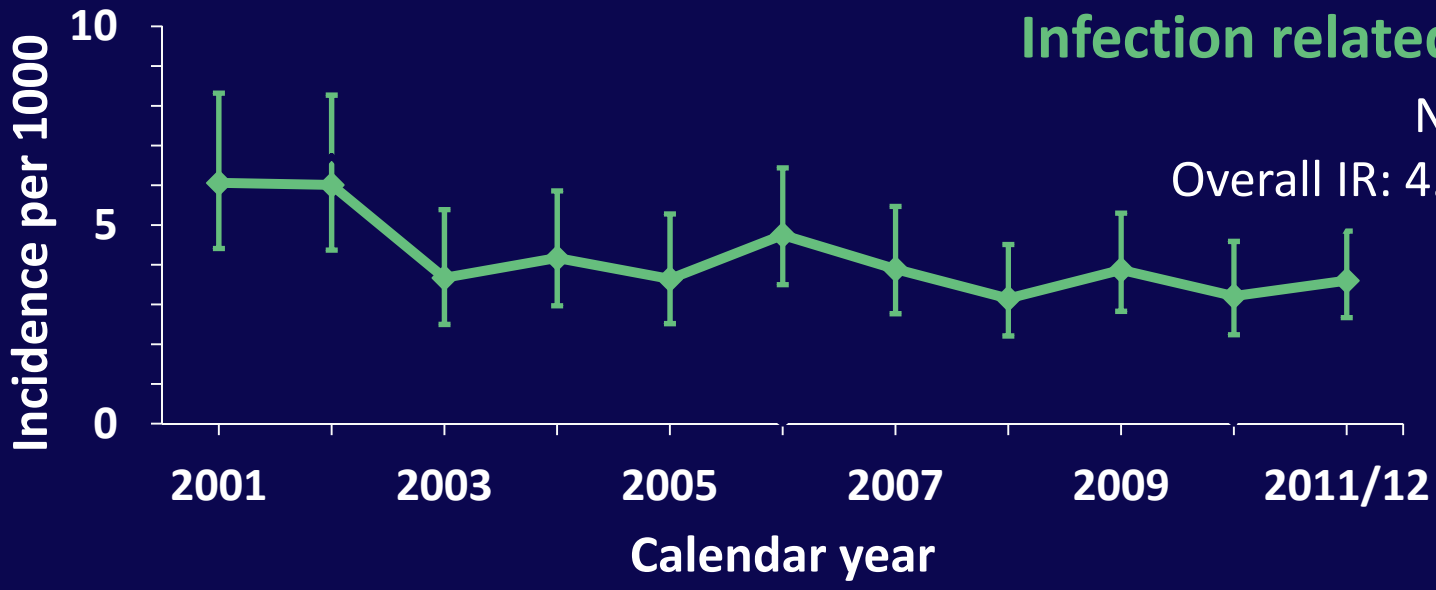
Incidence per year (95% CI)

Infection related malignancies

N: 388, PYF: 95033

Overall IR: 4.1 (95%: 3.7 – 4.5)

- 4.87% per year

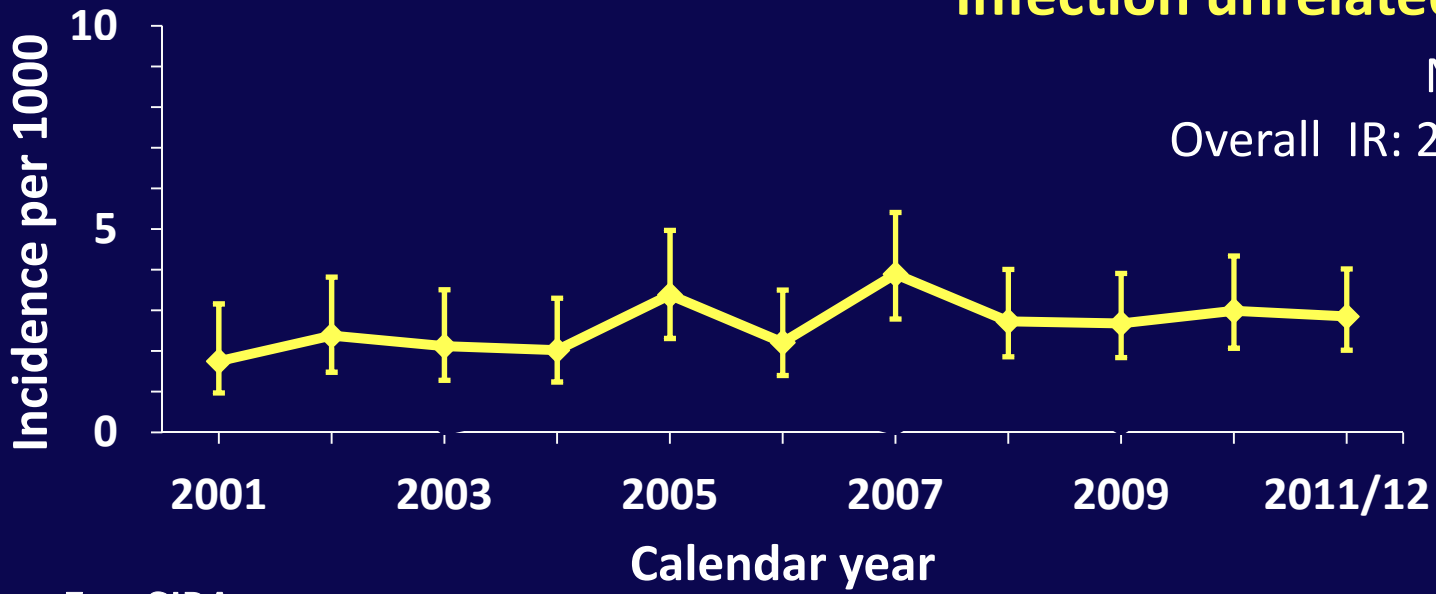


Infection unrelated malignancies

N: 255, PYF: 95033

Overall IR: 2.7 (95%: 2.4 – 3.0)

+ 3.36% per year



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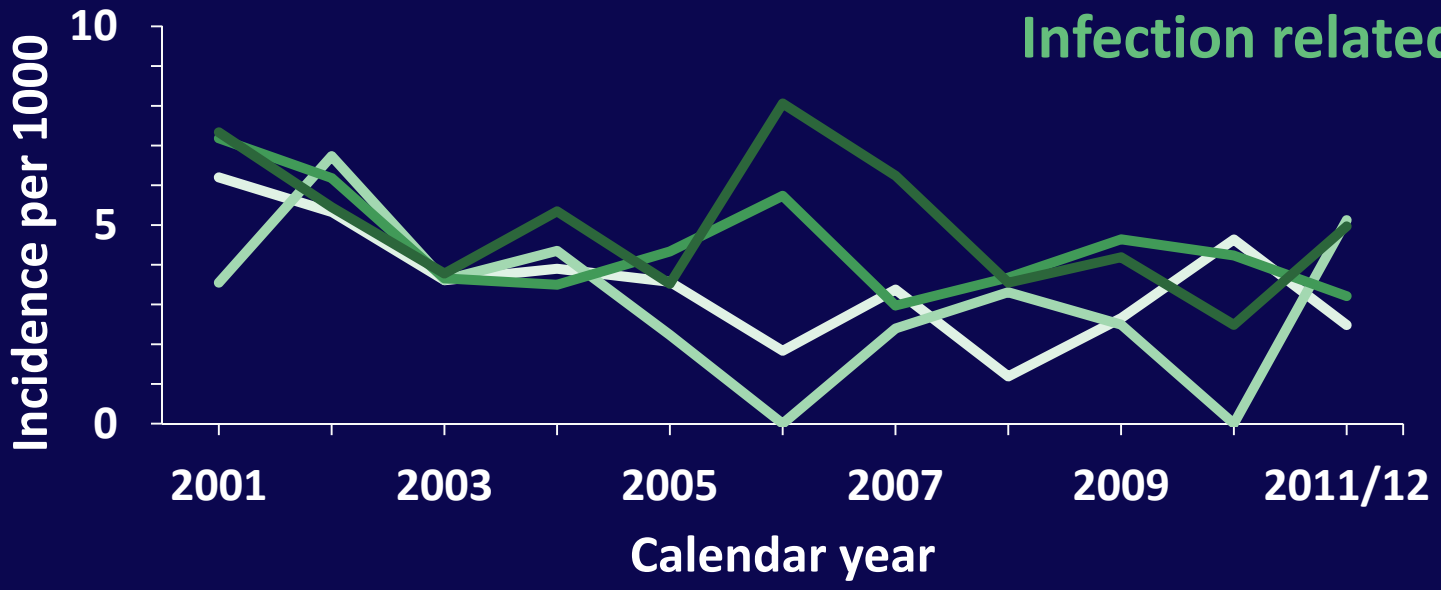
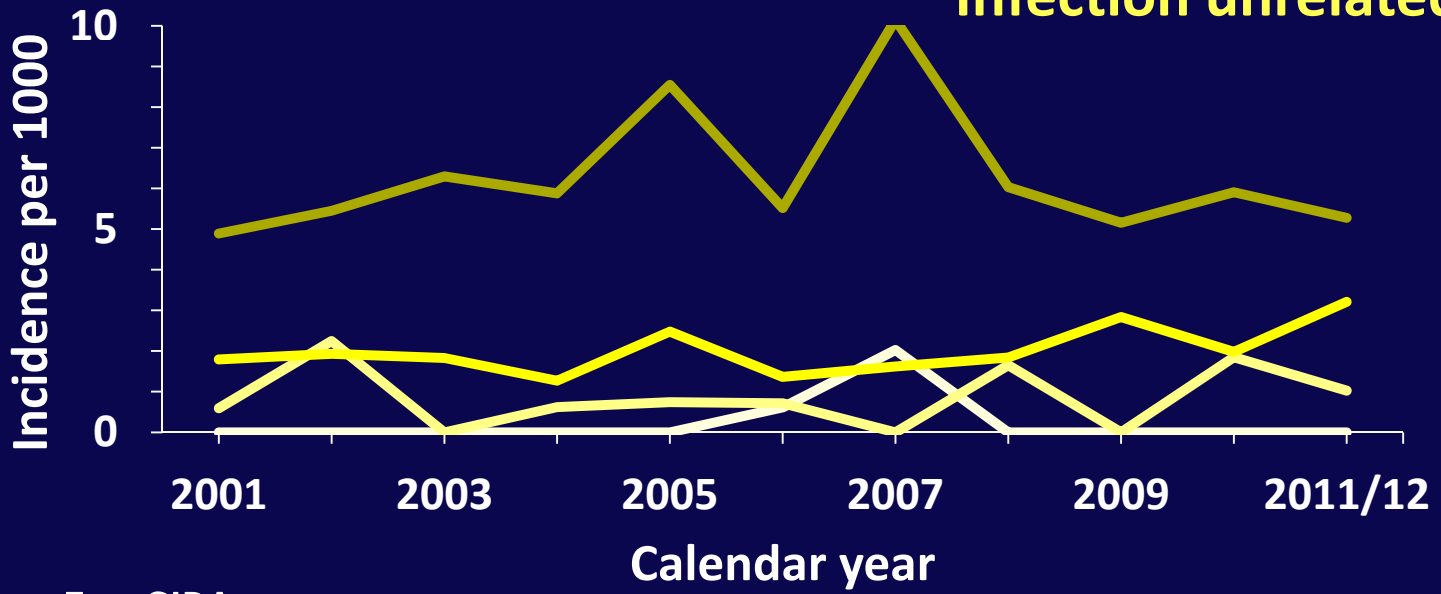
Incidence per year by age group (95% CI)

A1

Infection related malignancies



Infection unrelated malignancies



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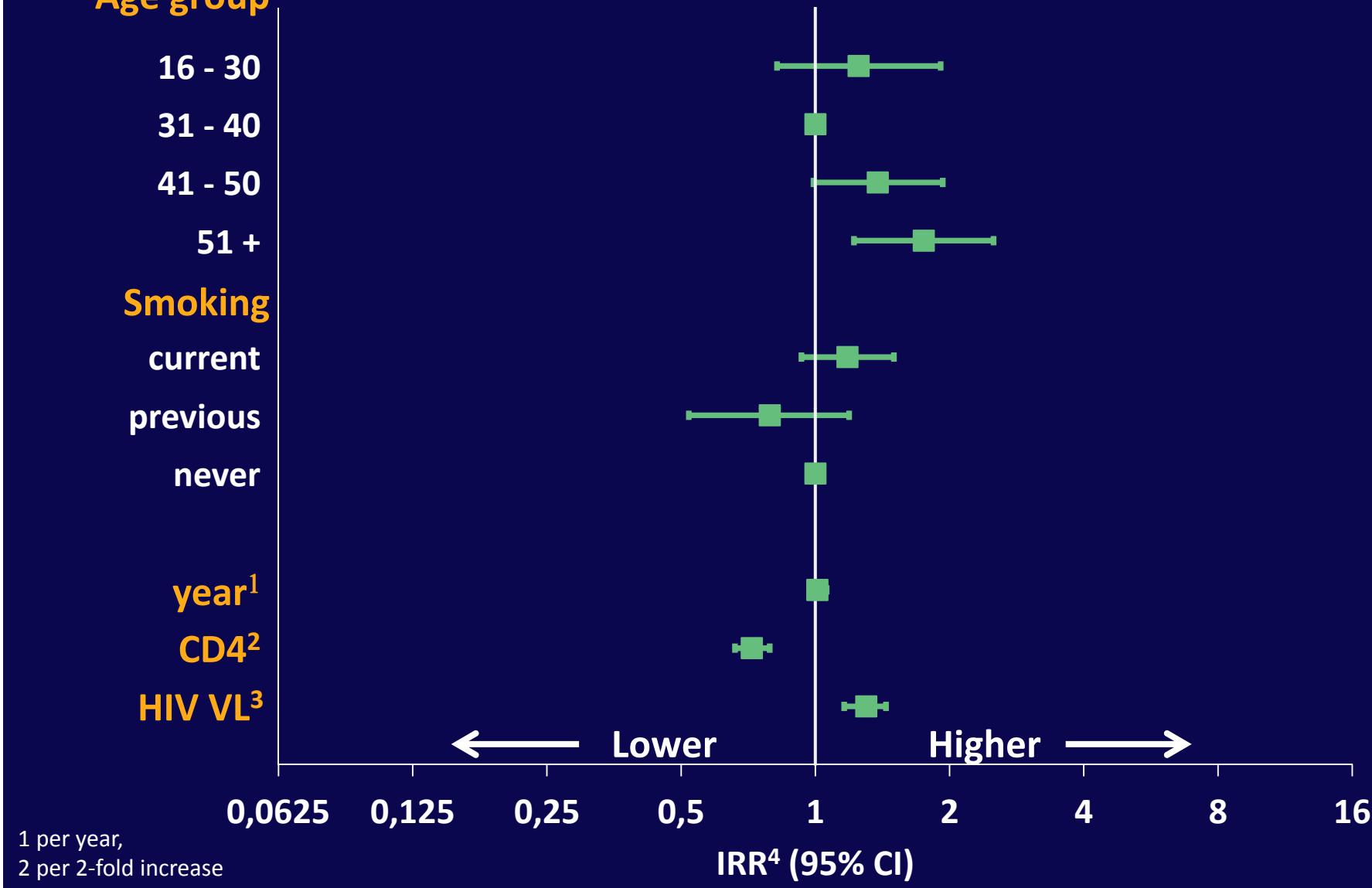
Slide 11

A12 Love this slide - have you tried making the overall line pale and think and bolding up the age ones? You eye is naturattly rawn to the summary from the previous slide rather than the age ones

Amanda; 08-10-2013

Adjusted IRR: Infection related malignancies



1 per year,
2 per 2-fold increase
3 per 10- fold increase
4 adjusted for age, calendar year, HIV VL, CD4 count, region, sex, prior AIDS, prior ADM, hep B, hep C, BMI, ethnicity, transmission group, treatmen regimen, PI regimen. NNRTI regimen, smoking status, time spent CD4<200, time spent HIV VL >400.

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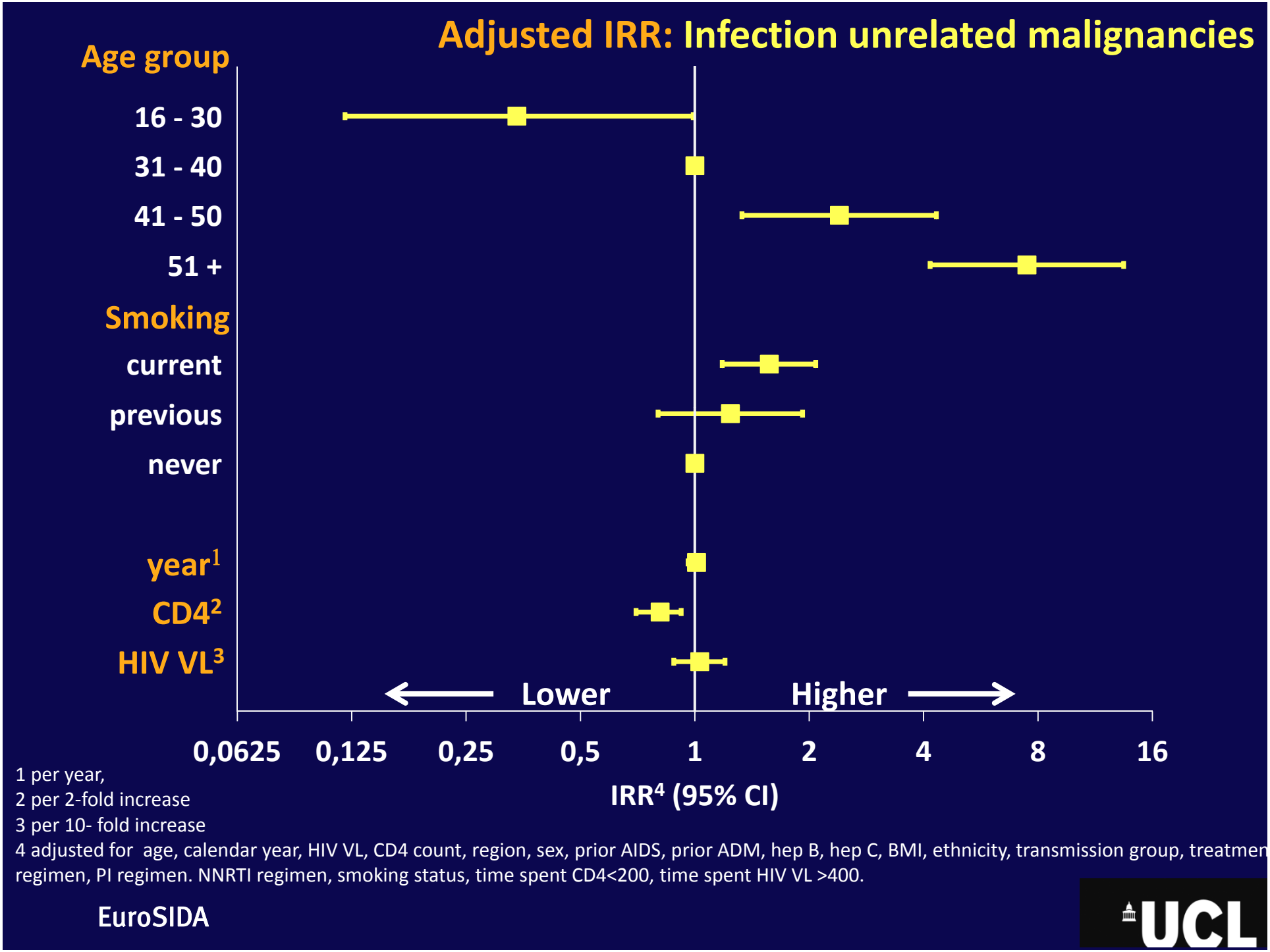
Adjusted IRR: Infection unrelated malignancies



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Forecast of incidence rate:
Infection related malignancies

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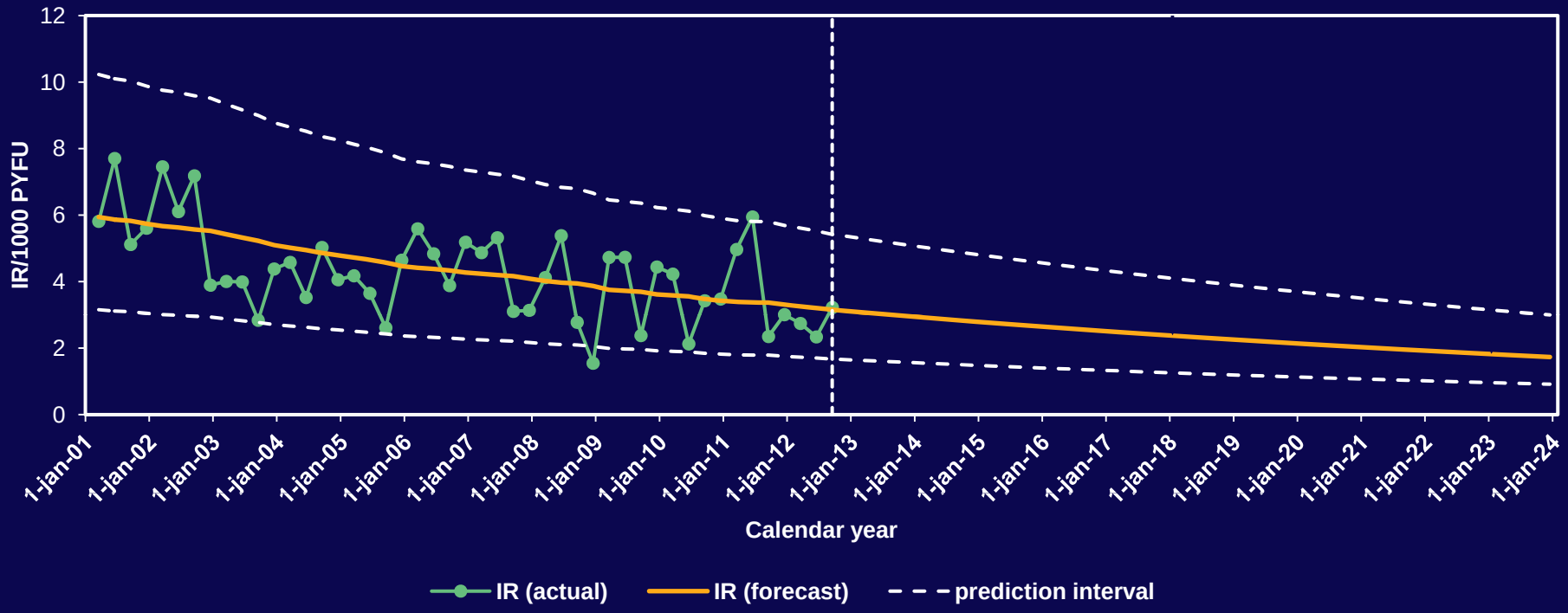
Infection related malignancies



Oct – Dec 2012: 3.0 (95% CI: 1.5, 5.5)

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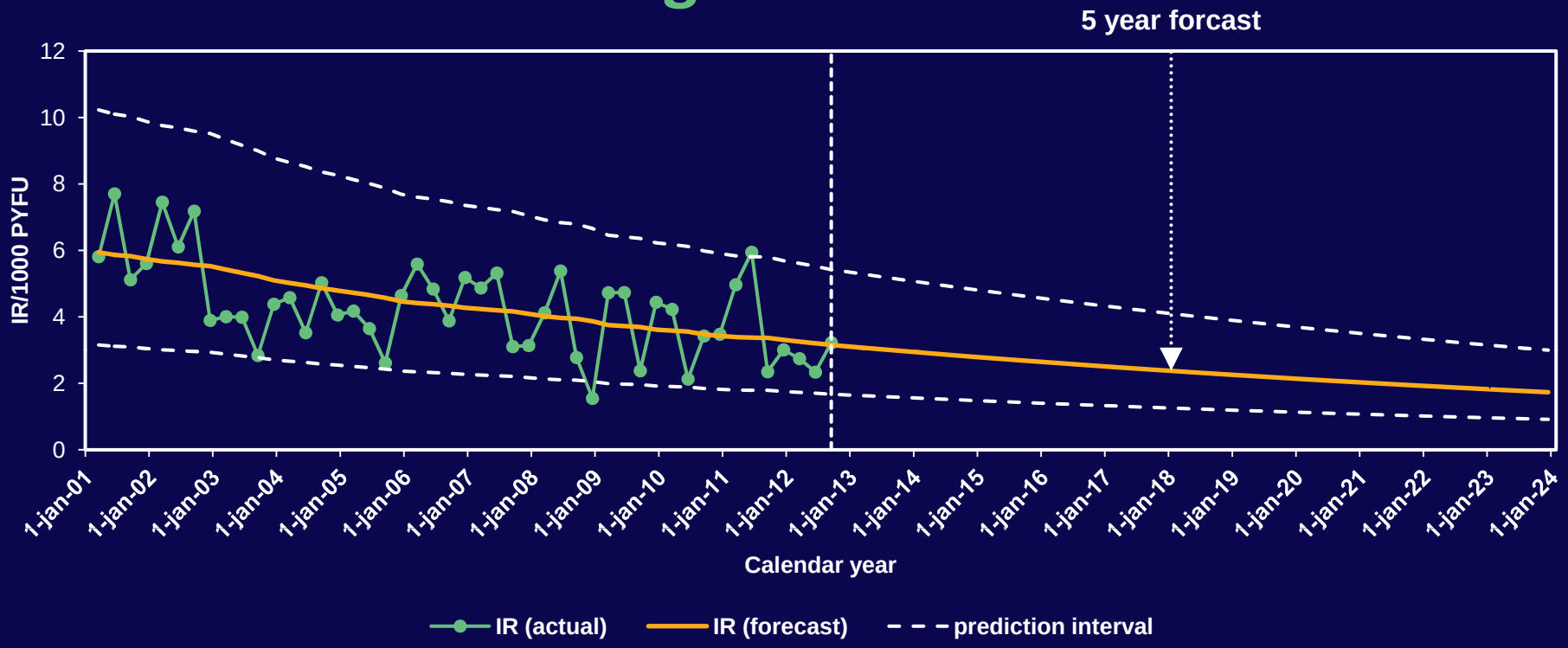
Forecast of incidence rate:
Infection related malignancies



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5 years forecast: 2.2 (95% CI: 1.1, 4.0)

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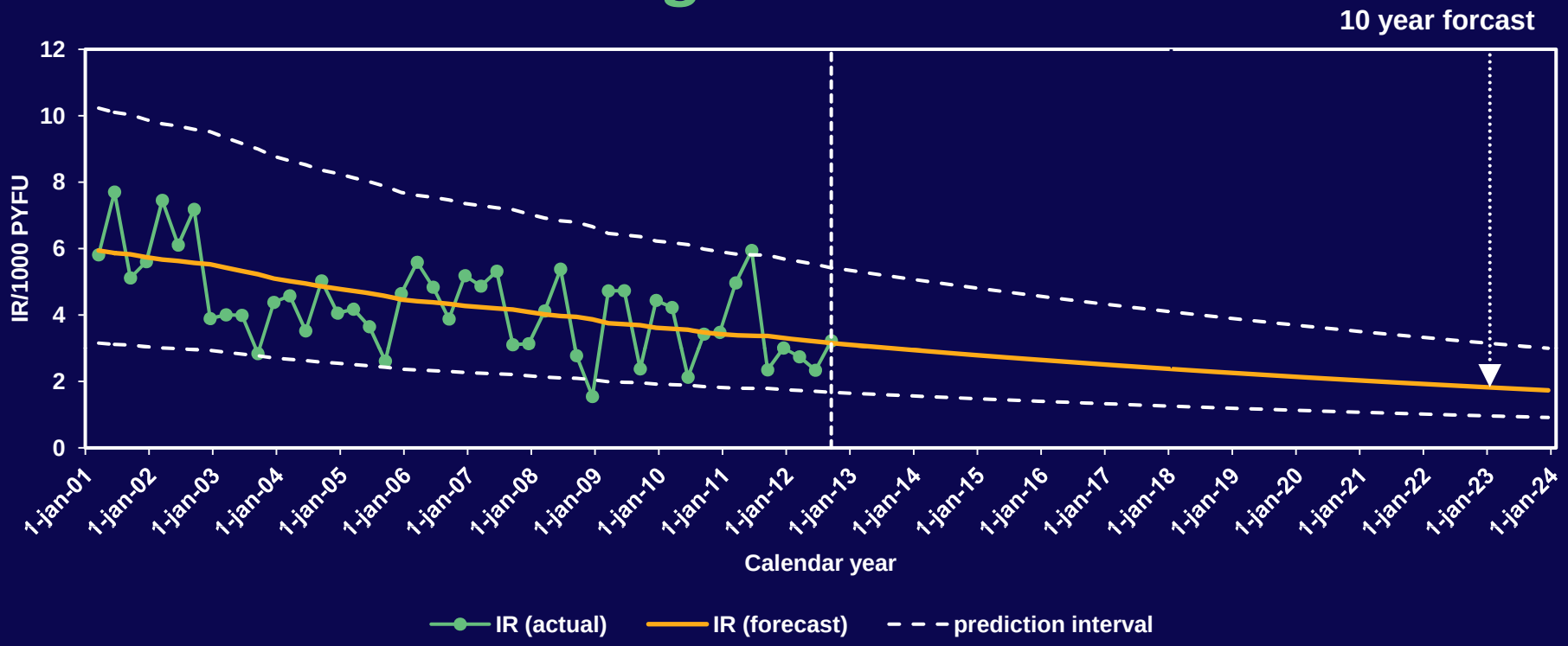

Oct – Dec 2012: 3.0 (95% CI: 1.5, 5.5)

5 years forecast: 2.2 (95% CI: 1.1, 4.0)

10 year forecast: 1.7 (95% CI: 0.7, 3.1)

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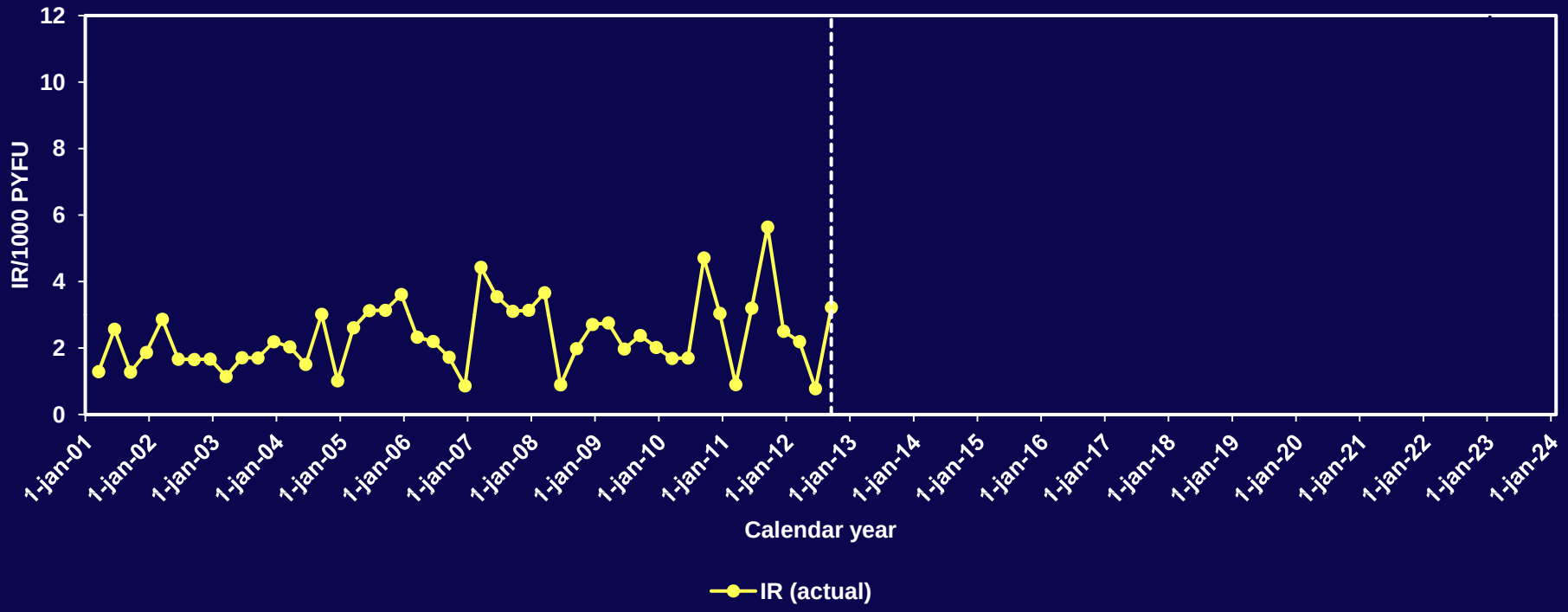
Forecast of incidence rate:
Infection unrelated malignancies



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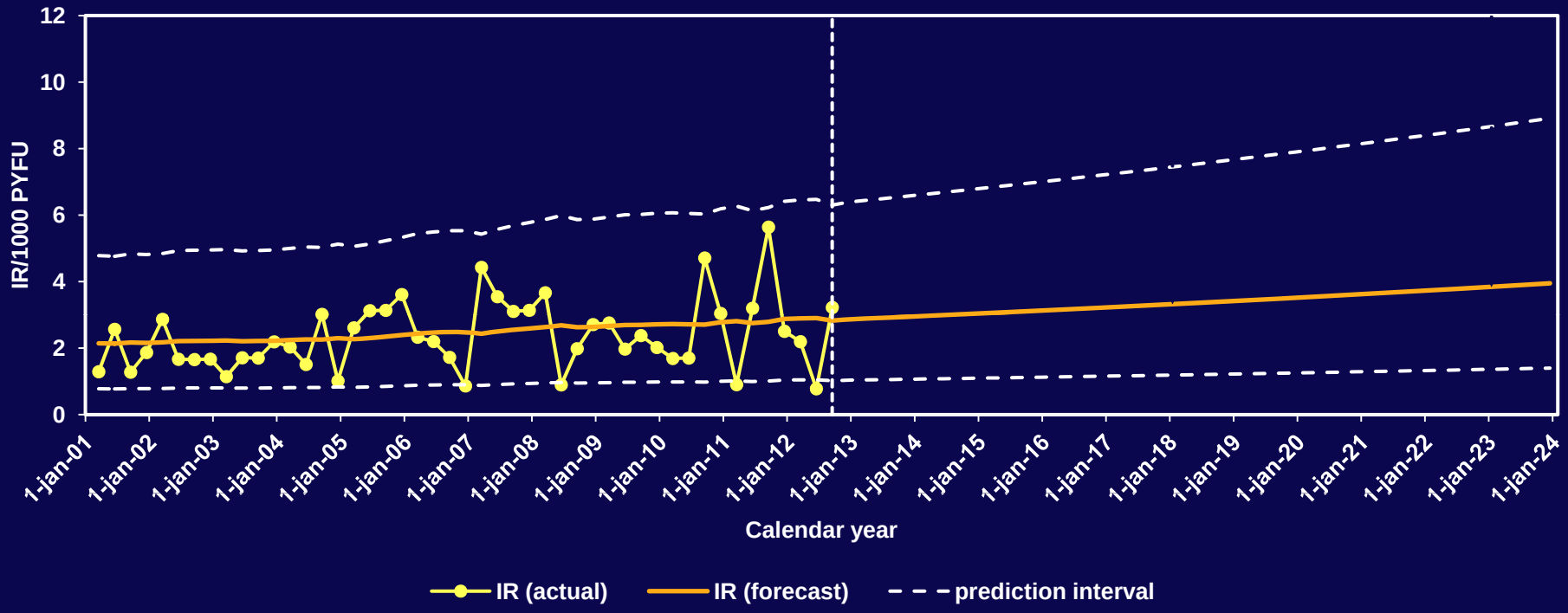

Oct – Dec 2012: 3.1 (95% CI: 1.2, 6.7)

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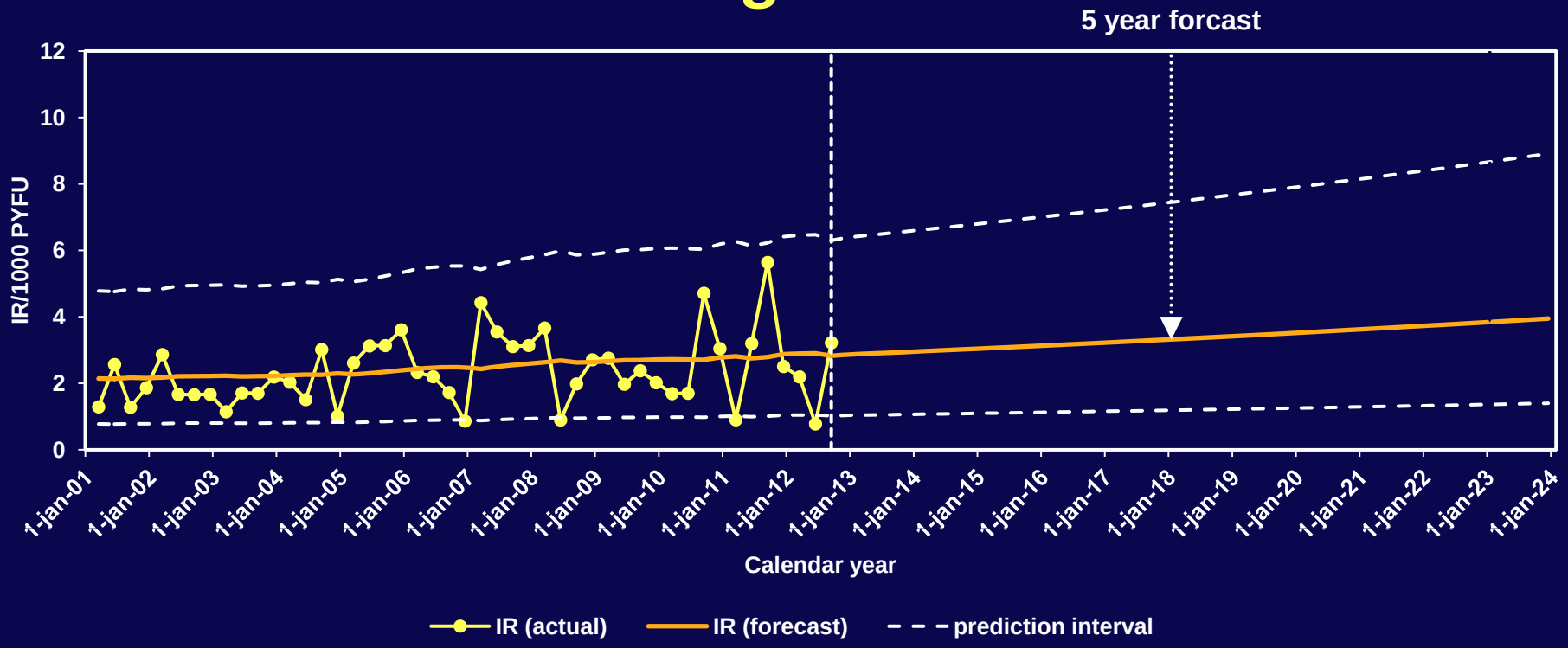
Forecast of incidence rate: Infection unrelated malignancies



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5 years forecast: 3.6 (95% CI: 1.4, 7.7)

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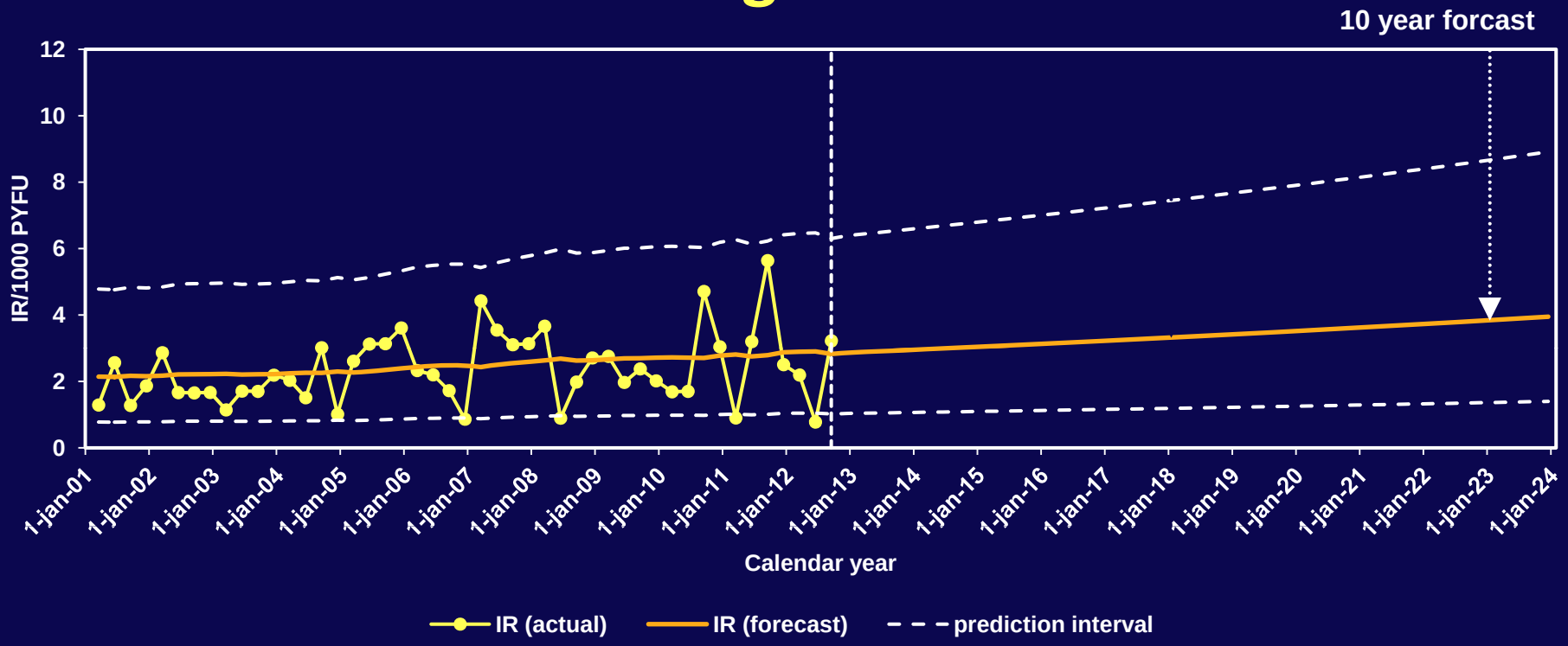
Forecast of incidence rate: Infection unrelated malignancies



Oct – Dec 2012: 3.1 (95% CI: 1.2, 6.7)

5 years forecast: 3.6 (95% CI: 1.4, 7.7)

10 year forecast: 4.1 (95% CI: 1.6, 8.8)

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Forecast of incidence rate (95% CI)

GROUP	Infection related malignancies		Infection unrelated malignancies	
	Oct – Dec 2012	5 years	0ct-Dec 2012	5 years
Overall	3.0 (1.5, 5.5)	2.2 (1.1, 4.0)	3.1 (1.2, 6.7)	3.6 (1.4, 7.7)
BL age >50	2.7 (0.6, 7.3)	1.5 (0.1, 4.7)	7.8 (3.4, 16.9)	9.1 (4.0, 19.6)
MSM	3.6 (1.7, 6.7)	2.5 (1.1, 4.8)	3.5 (1.6, 7.0)	4.2 (1.9, 8.1)
CD4<350	4.6 (1.8, 9.8)	2.7 (0.9, 6.3)	3.5 (1.4, 7.7)	4.4 (1.84, 9.41)
Current smokers	2.8 (0.5, 8.4)	2.3 (0.8, 5.0)	3.4 (1.4, 7.3)	5.8 (1.8, 15.5)

All decreasing

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Forecast of incidence rate (95% CI)

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Limitations

Observational study

Follow-up from 2001

Small Counts

Forecasts

Lack of population projections

Conclusions

Infection related malignancy incidence is decreasing

Infection unrelated malignancy incidence is stable.

Older age is associated with infection related and unrelated cancers.

Aging population will lead to increasing proprotion of infection unrelated malignancies.

Targeted preventive measures and studies evaluating the cost-benefit of screening should be considered

The EuroSIDA Study Group

The multi-centre study group of EuroSIDA (national coordinators in parenthesis).

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Additional voting members: J Lundgren, A Phillips, P Reiss

Coordinating Centre Staff: O Kirk, A Mocroft, A Cozzi-Lepri, D Grint, A Schultze, L Shepherd, D Raben, D Podlekareva, J Kjær, L Peters, J E Nielsen, C Matthews, A H Fischer, A Bojesen

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