National Cancer Registry Ireland

Cancer Control in Ireland

How are we doing?

Prof Deirdre Murray, NCRI

Cancer Policy 1996 - present

National Cancer Registry Ireland

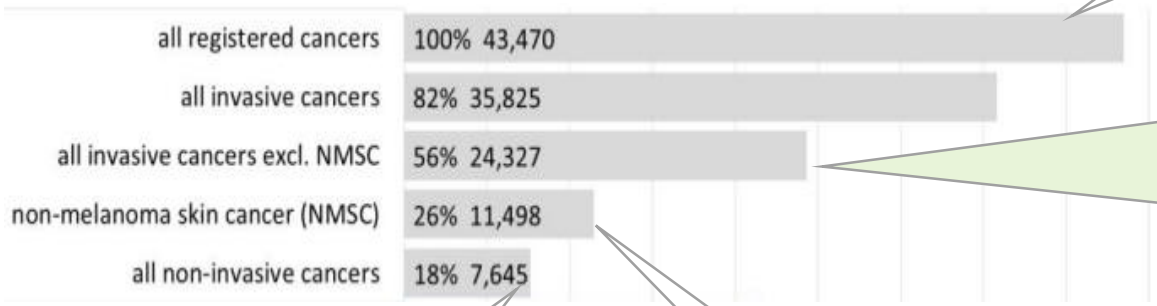
Cancer incidence

Annual average case count

2018-2020

National Cancer Registry Ireland

'all registered tumours' - estimated at c.**43,470** per year



56% **'potentially life-changing'** invasive cancers

18% non-invasive neoplasms

- *in situ* carcinomas,
- tumours of uncertain behaviour
- benign brain & CNS

26% **Non melanoma skin cancers**

Cancer incidence

Cases counts (annual average 2018-2020)

National Cancer Registry Ireland

Annual average case count: 2018 -2020			
cancer site	**males**	**females**	**all**
all invasive excl. NMSC	**13,027**	**11,299**	**24,327**
mouth & pharnyx	375	161	536
oesophagus	342	173	515
stomach	348	209	557
colorectum	**1,467**	**1,095**	**2,562**
liver	236	109	344
pancreas	313	311	624
lung	**1,457**	**1,214**	**2,672**
melanoma of skin	584	586	1,170
other skin	*6,605*	*4,894*	*11,498*
breast	**29**	**3,363**	**3,392**
cervix		253	253
uterine		538	538
ovary		401	401
prostate	**3,941**		**3,941**
testis	162		162
kidney	424	243	667
brain & CNS	262	203	464
thyroid	84	209	293
Hodgkin lymphoma	79	70	149
non-Hodgkin lymphoma	496	358	854
multiple myeloma	226	158	384
leukaemia	364	219	583

‘Big 4 cancers’

Cancer mortality

ANNUAL AVERAGE MORTALITY ATTRIBUTABLE TO CANCER: 2018 - 2020

National Cancer Registry Ireland

Cancer deaths: annual average: 2018 -2020			
cancer site	**males**	**females**	**all**
all neoplams	**5,237**	**4,514**	**9,751**
all invasive cancers	**5,101**	**4,392**	**9,493**
mouth & pharnyx	140	55	195
oesophagus	291	148	438
stomach	199	108	306
colorectum	**579**	**423**	**1,001**
liver	242	155	398
pancreas	294	271	565
lung	**1,083**	**833**	**1,916**
melanoma of skin	106	56	162
breast	**6**	**748**	**754**
cervix		89	89
uterine		107	107
ovary		295	295
prostate	**605**		**605**
testis	5		5
kidney	140	68	209
bladder	161	74	235
brain & CNS	183	125	308
thyroid	10	10	20
Hodgkin lymphoma	12	10	22
non-Hodgkin lymphoma	169	123	291
multiple myeloma	104	82	186
leukaemia	173	101	274

Source of data: Central Statistics Office, Ireland

'Big 4 cancers'

Cancer incidence and deaths 1994 - 1998

National Cancer Registry Ireland

Table 1.1 Number of cases and deaths for the twenty commonest cancers; 1994 – 1998 annual average

	NEW CANCER CASES				CANCER DEATHS			
	female		male		female		male	
	no. per year	% of total	no. per year	% of total	no. per year	% of total	no. per year	% of total
all registered cancers	9912	100%	9487	100%	3448	100%	4010	100%
all malignant cancers	8149	82%	8946	94%	3428	99%	3989	99%
non-melanoma skin	2375	24%	2792	29%	9	<1%	22	1%
breast	1584	16%	13	<1%	631	18%	5	<1%
lung	507	5%	972	10%	519	15%	971	24%
prostate			1150	12%			513	13%
colon	511	5%	572	6%	323	9%	370	9%
rectum and anus	237	2%	410	4%	87	3%	145	4%
lymphoma	222	2%	256	3%	104	3%	129	3%
stomach	174	2%	295	3%	156	5%	234	6%
bladder	128	1%	328	3%	54	2%	112	3%
melanoma skin	235	2%	140	1%	32	1%	28	1%
leukaemia	145	1%	199	2%	89	3%	121	3%
pancreas	163	2%	160	2%	174	5%	182	5%
ovary	312	3%			218	6%		
oesophagus	116	1%	173	2%	115	3%	187	5%
brain	103	1%	144	2%	94	3%	119	3%
kidney	87	1%	151	2%	48	1%	80	2%
corpus uteri	205	2%			44	1%		
cervix	177	2%			75	2%		
multiple myeloma	78	1%	99	1%	68	2%	76	2%
larynx	18	<1%	90	1%	11	0%	44	1%

Figure 1.1 Number of new cases for the twenty commonest cancers; 1994 – 1998 annual average

Figure 1.2 Number of deaths for the twenty commonest cancers; 1994 – 1998 annual average

So what has changed?

National Cancer Registry Ireland

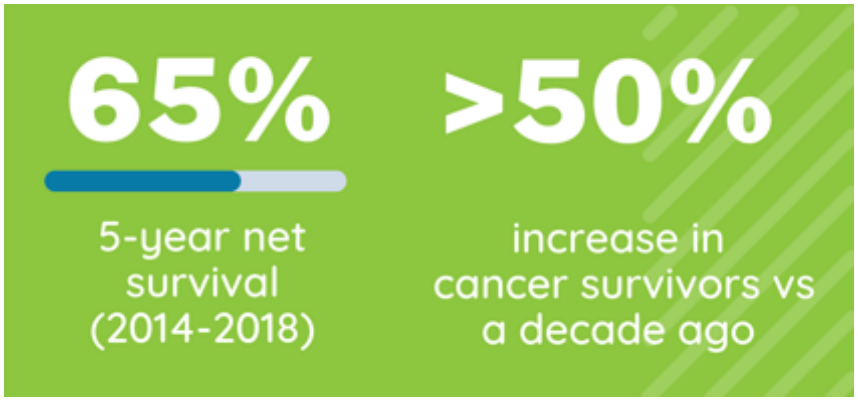
Indicators of Cancer Control

Most recent trends

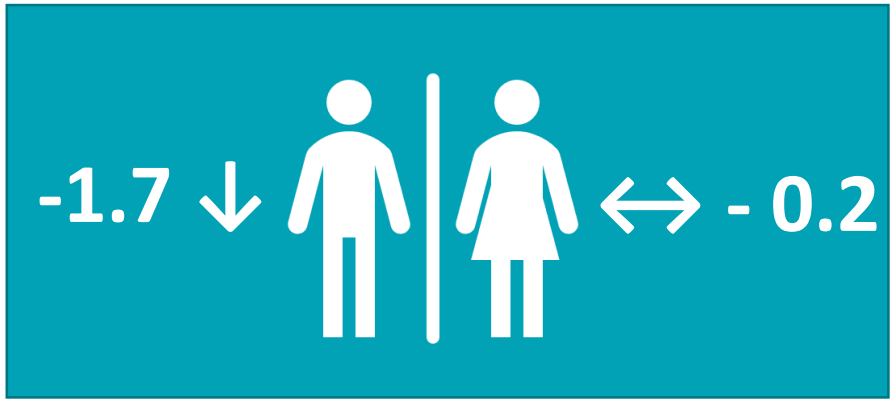
National Cancer Registry Ireland

Cancer Incidence

Cancer Survival

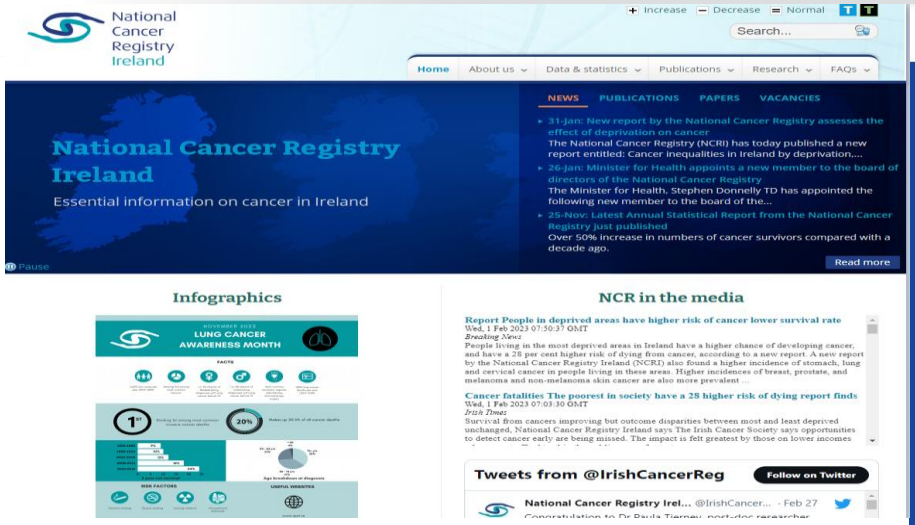


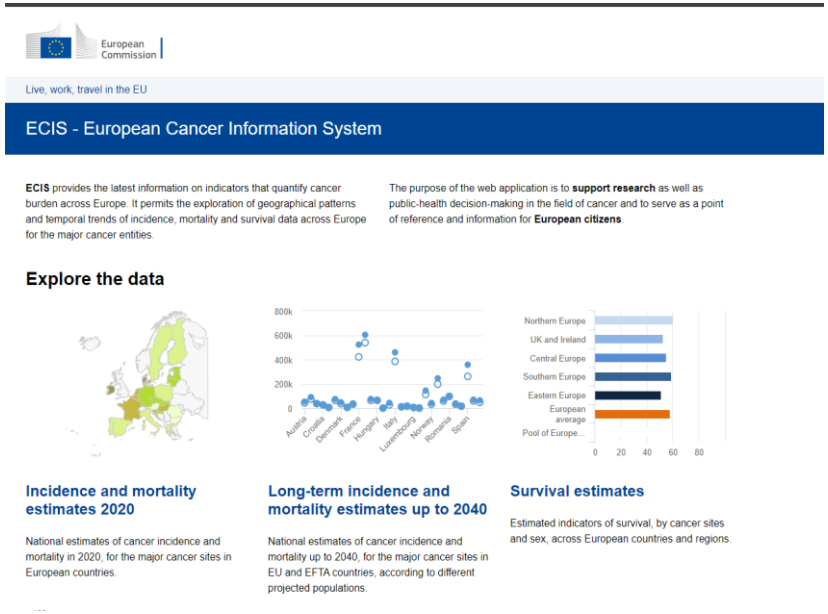
Cancer Mortality



Data Sources

National Cancer Registry Ireland





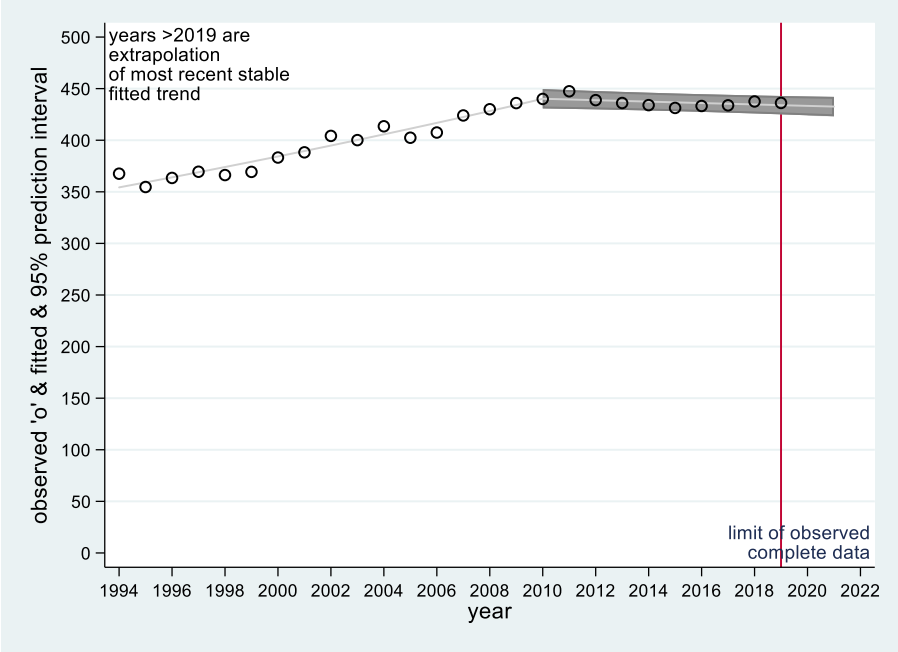
Cancer incidence & mortality

RATES per 100,000 (age-standardised)

National Cancer Registry Ireland

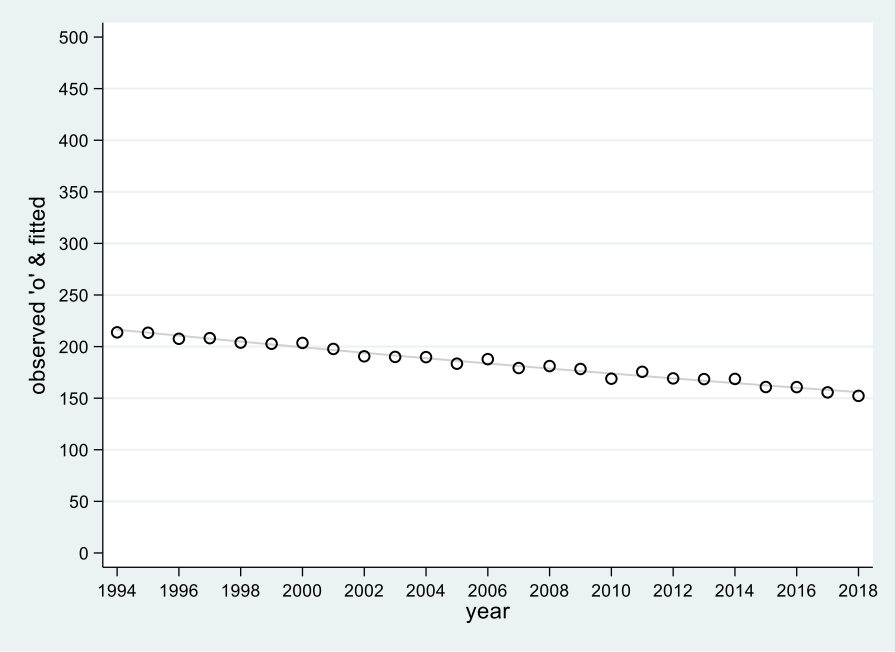
all invasive cancers excl. NMSC: MALES & FEMALES

INCIDENCE: 1994-2019



from-to	apc	ci	trend
1994-2010	1.4	[1.2,1.5]	up
2010-2019	-0.2	[-0.5,0.2]	flat

MORTALITY: 1994-2018



from-to	apc	ci	trend
1994-2018	-1.4	[-1.4,-1.3]	down

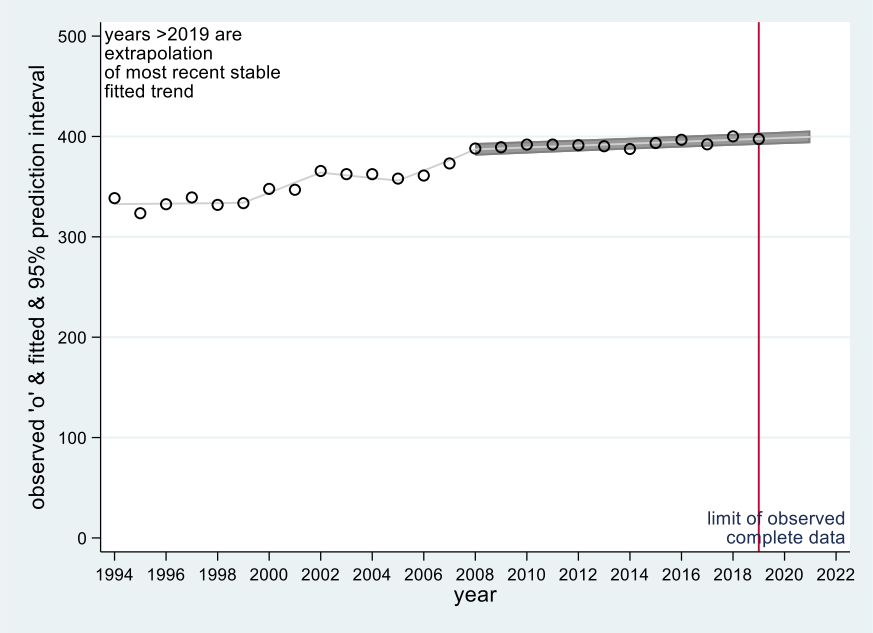
Cancer incidence & mortality

RATES per 100,000 (age-standardised)

National Cancer Registry Ireland

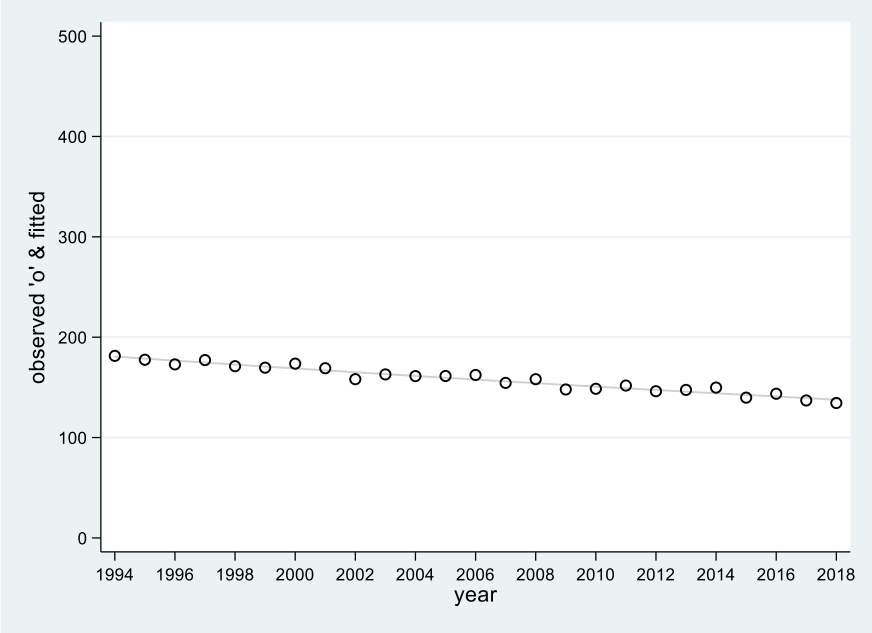
all invasive cancers excl. NMSC: FEMALES

INCIDENCE: 1994-2019



from-to	apc	ci	trend
1994-1999	0.1	[-0.9,1.0]	↔
1999-2002	2.9	[-1.0,7.1]	↔
2002-2005	-0.8	[-4.4,3.0]	↔
2005-2008	2.8	[-0.8,6.6]	↔
2008-2019	0.2	[0.0,0.5]	↑

MORTALITY: 1994-2018



from-to	apc	ci	trend
1994-2018	-1.1	[-1.2,-1.0]	↓

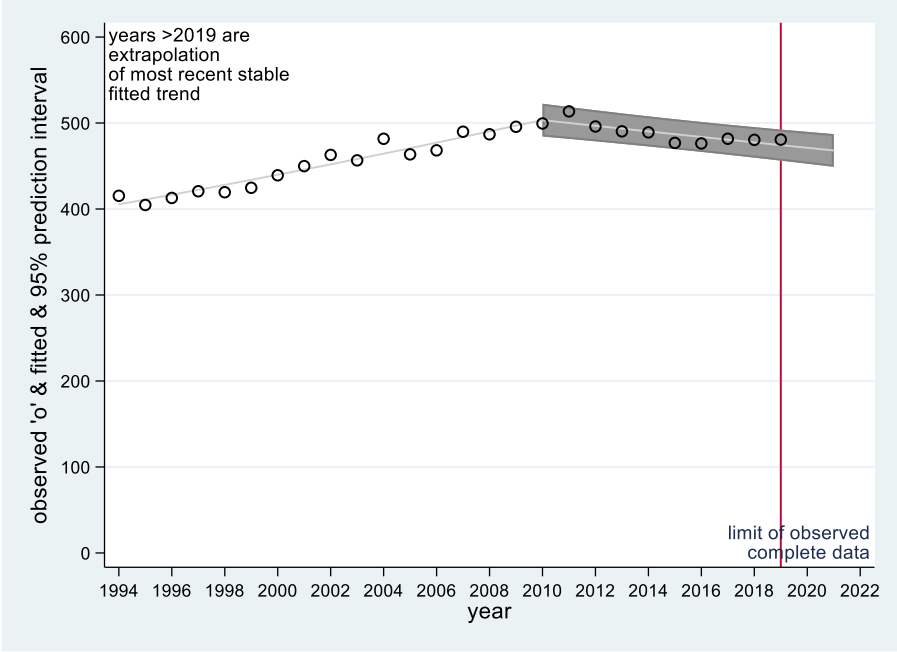
Cancer incidence & mortality

RATES per 100,000 (age-standardised)

National Cancer Registry Ireland

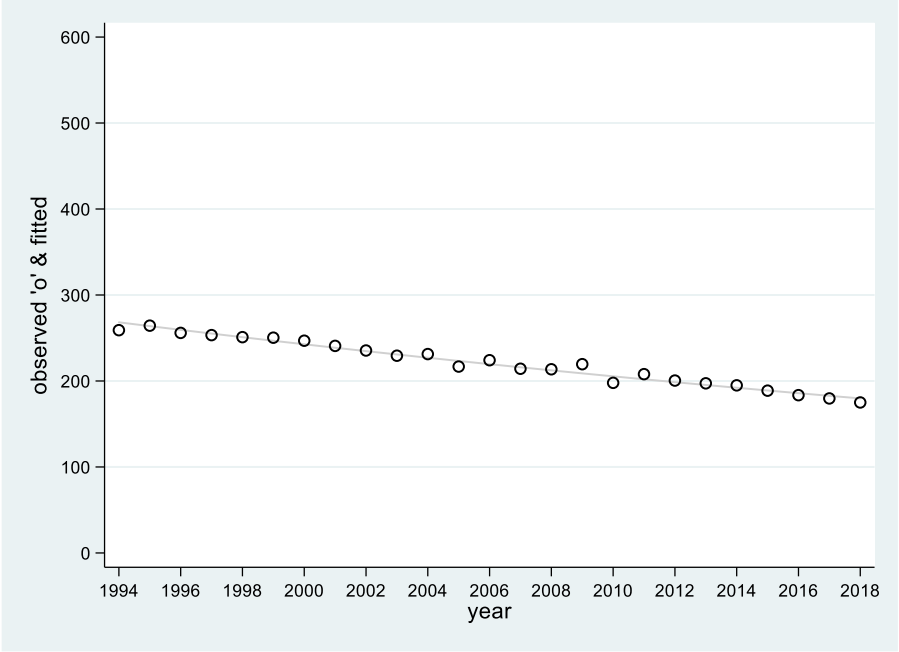
all invasive cancers excl. NMSC: MALES

INCIDENCE: 1994-2019



from-to	apc	ci	trend
1994-2010	1.4	[1.2,1.6]	↑
2010-2019	-0.7	[-1.1,-0.3]	↓

MORTALITY: 1994-2018



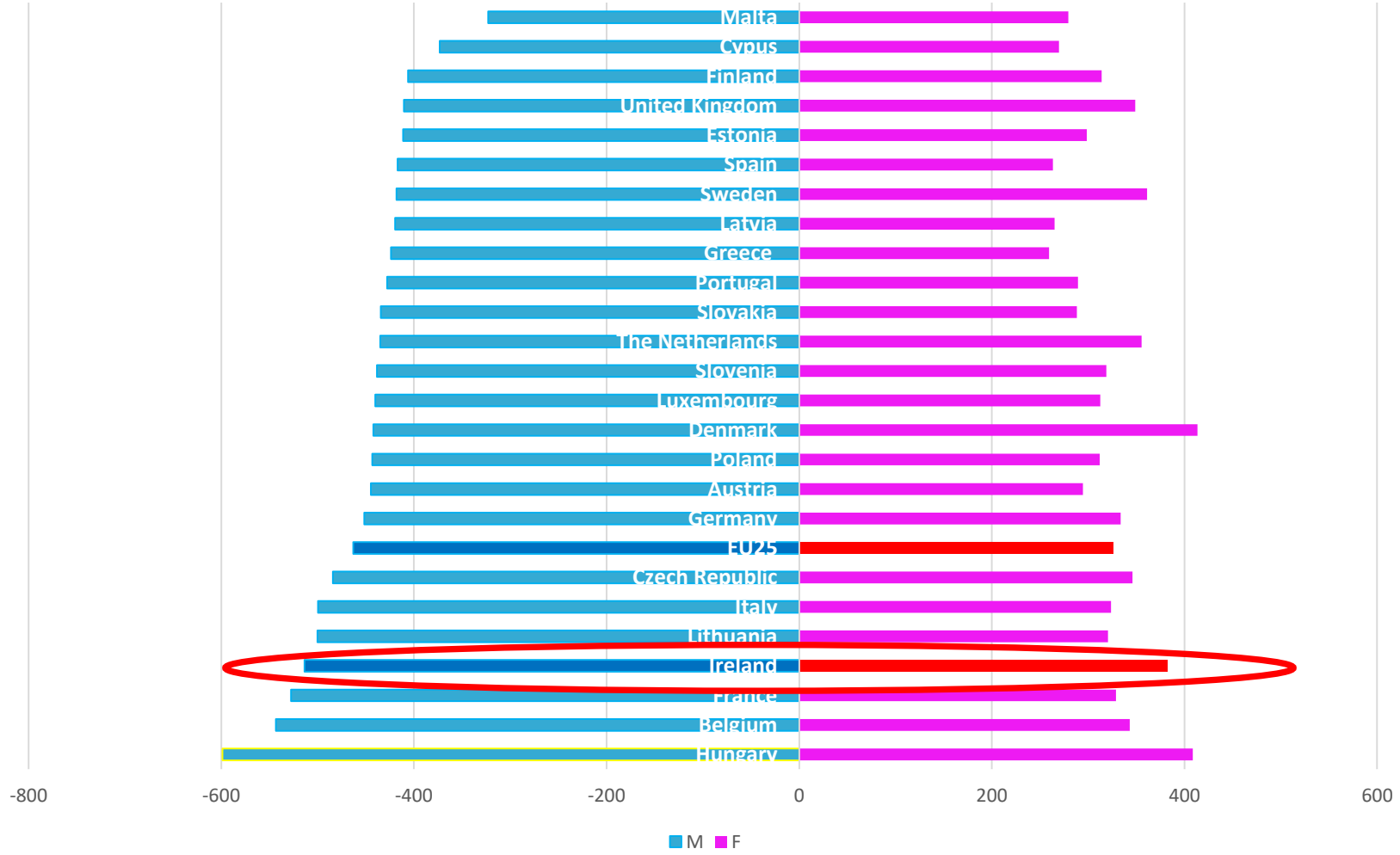
from-to	apc	ci	trend
1994-2018	-1.4	[-1.4,-1.3]	↓

European comparisons

Incidence males and females, 2006

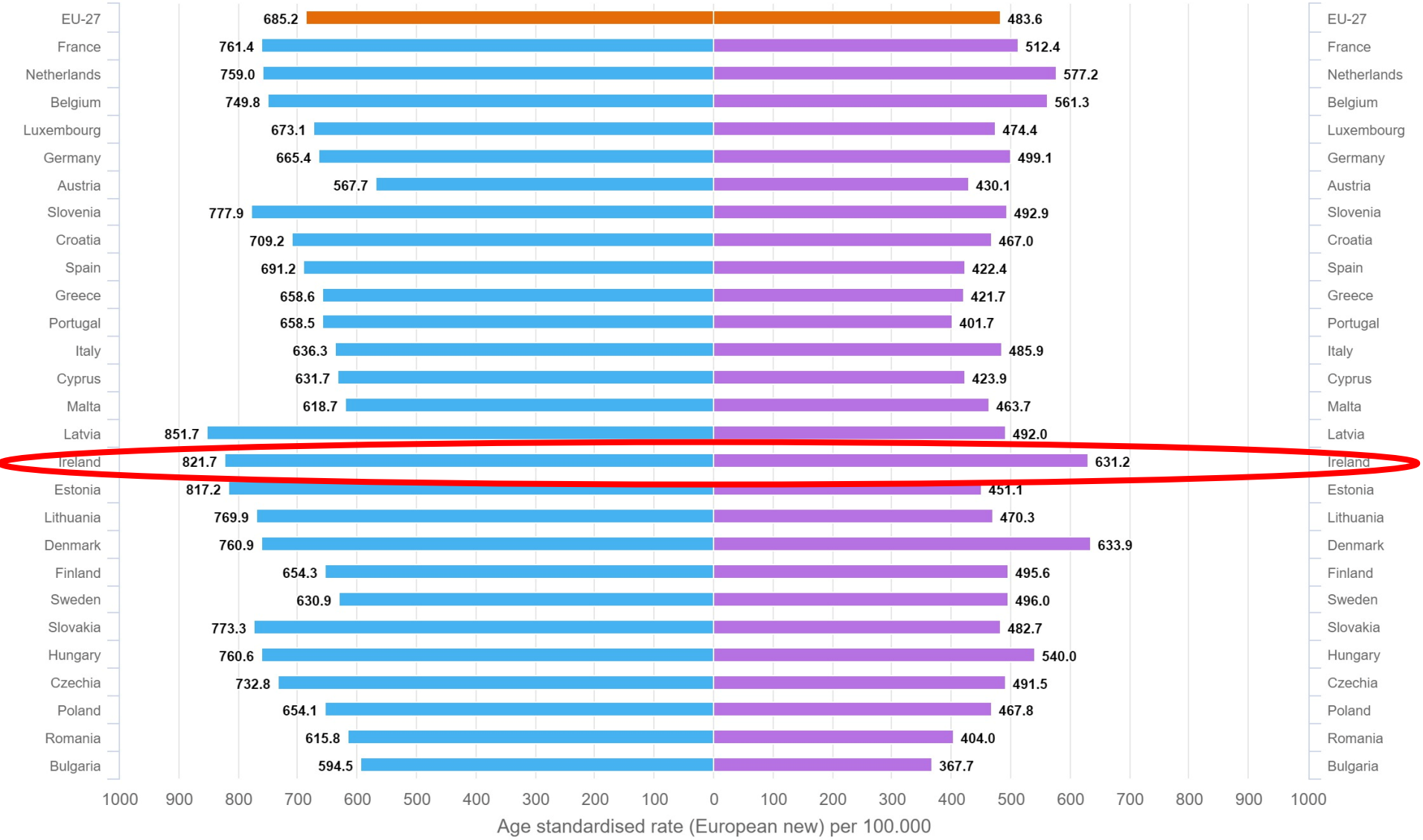
National Cancer Registry Ireland

Estimated age standardised incidence rates, by sex and by country, 2006



Estimated incidence by country - Comparison by sex

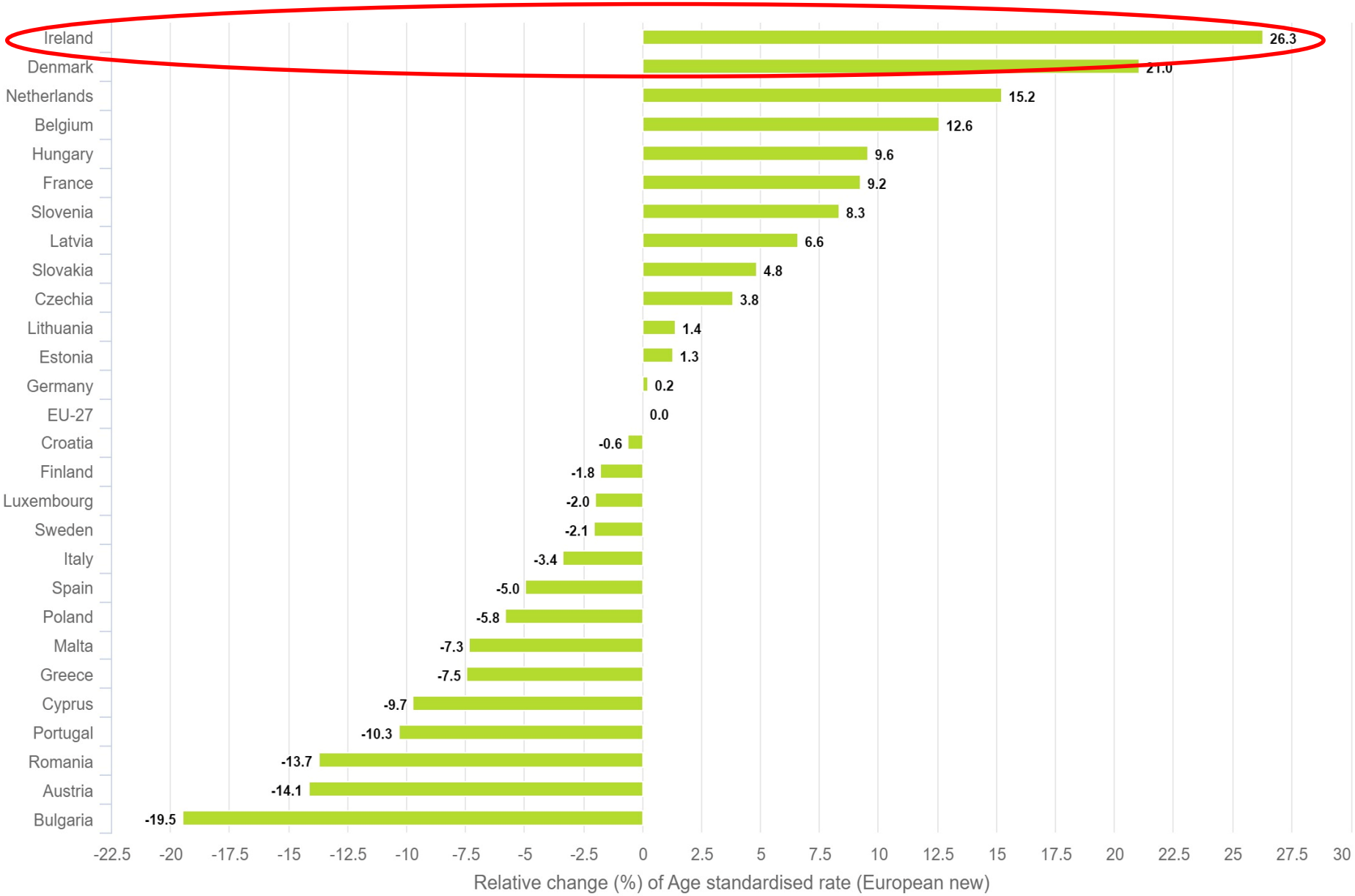
EU27, Both sexes, All sites but non-melanoma skin, All ages, 2020



Sex	
Male	
Female	

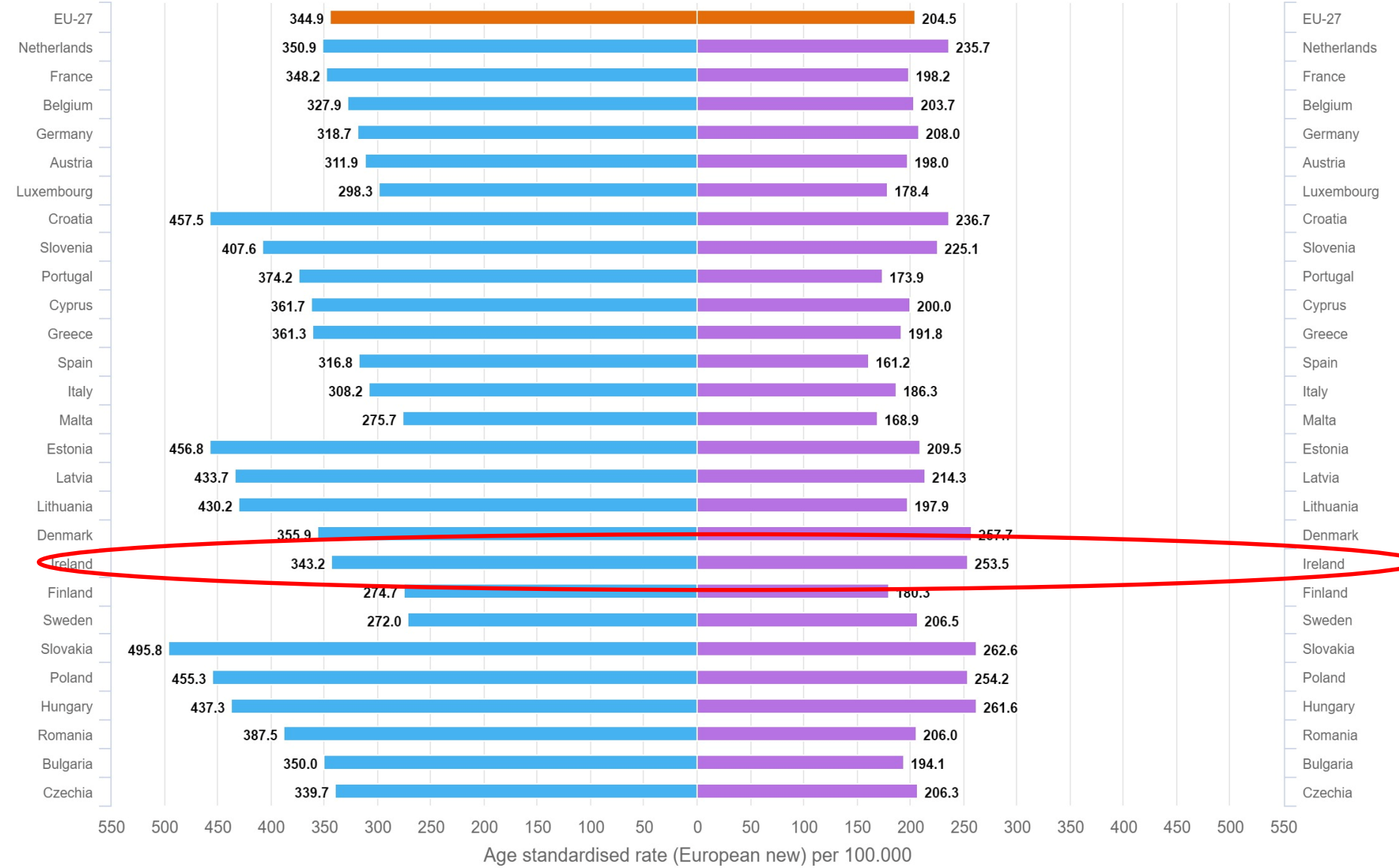
Estimated incidence by country - comparison with EU-27

Both sexes, All sites but non-melanoma skin, All ages, 2020



Estimated mortality by country - Comparison by sex

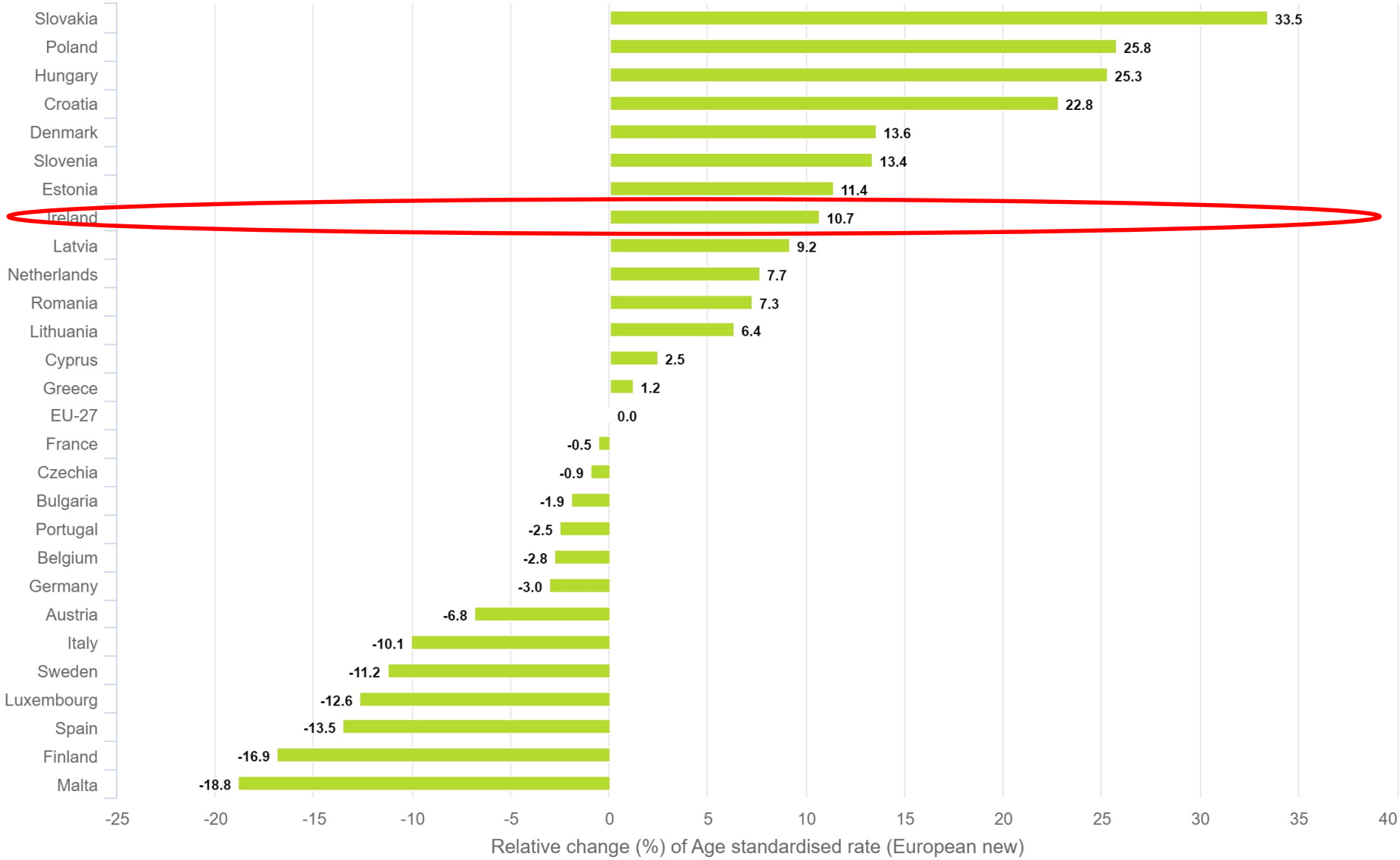
EU27, Both sexes, All sites but non-melanoma skin, All ages, 2020



Sex	
Male	
Female	

Estimated mortality by country - comparison with EU-27

Both sexes, All sites but non-melanoma skin, All ages, 2020

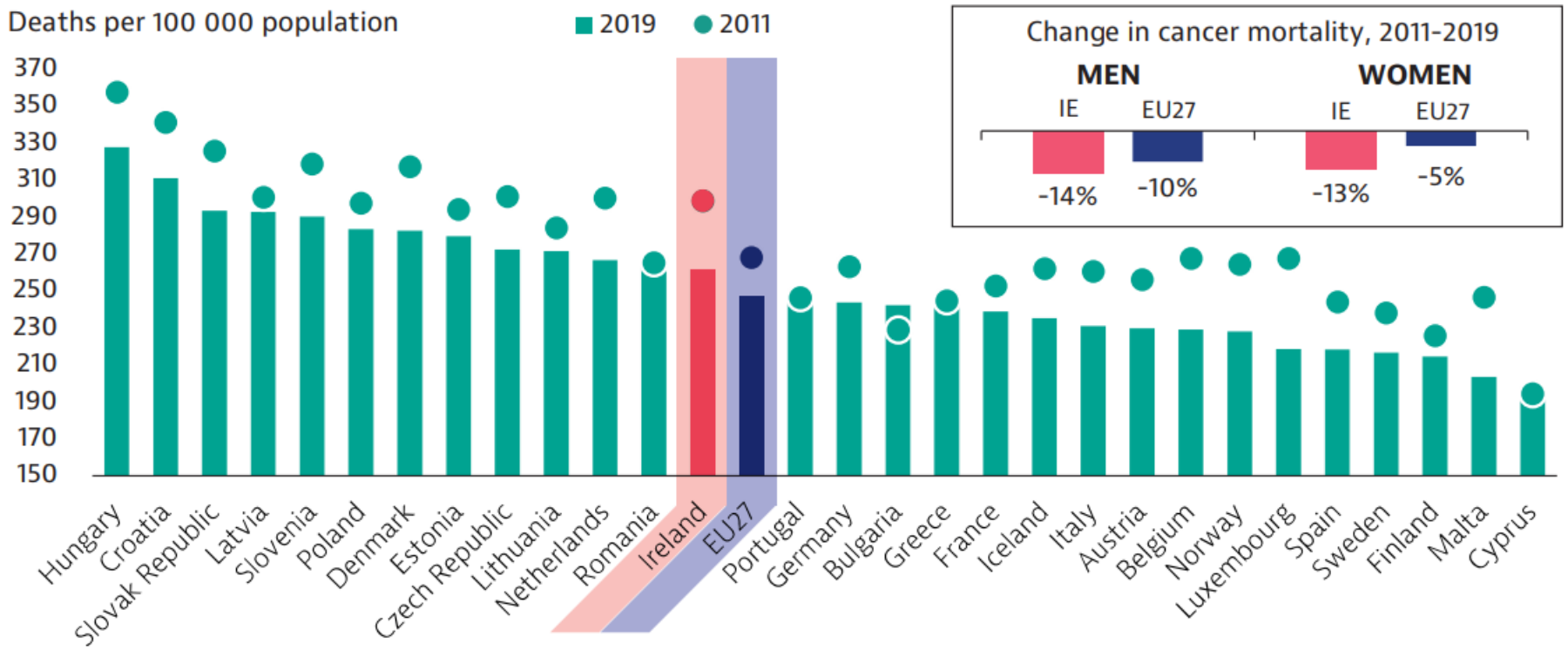


European Cancer Inequalities Registry

Country Cancer Profiles 2023

National Cancer Registry Ireland

Figure 2. Ireland's cancer mortality in 2019 was higher than the EU average



Note: The EU average is weighted (calculated by Eurostat for 2011-2017 and by the OECD for 2018-2019).
Source: Eurostat Database.

https://www.oecd-ilibrary.org/docserver/f31164f8-en.pdf?expires=1677778770&id=id&accname=guest&checksum=53F8DEC8E2C6C2654FF197E769F21853

Cancer Survival

National Cancer Registry Ireland

Five-year survival average 2014-2018

65%

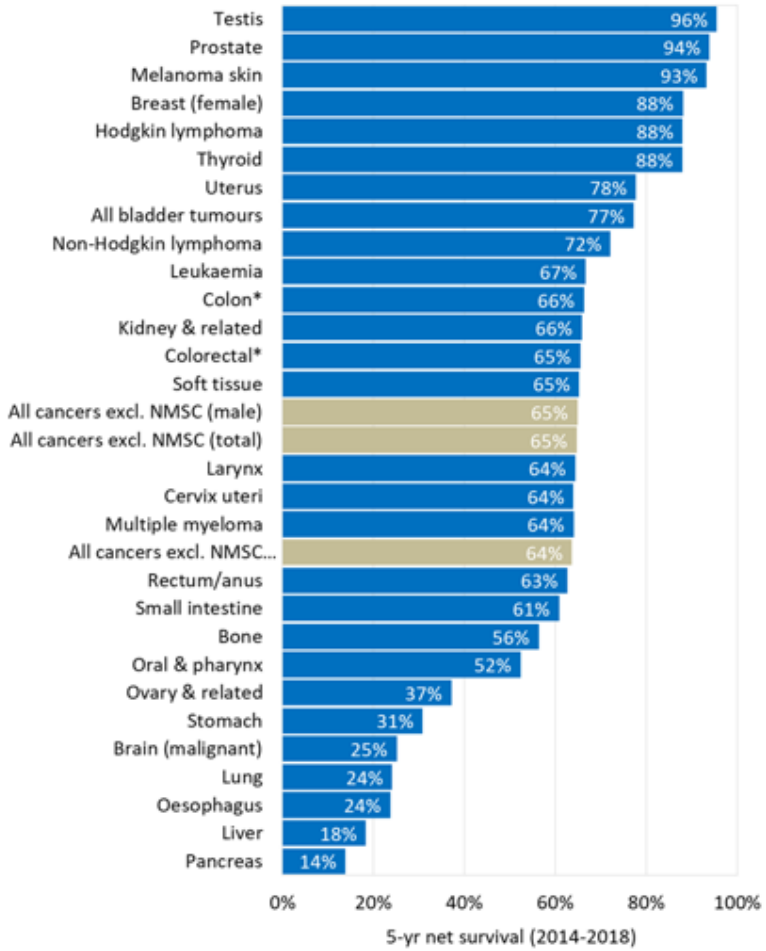
Cancer survival

Ranking of cancer type in Ireland for five-year net survival

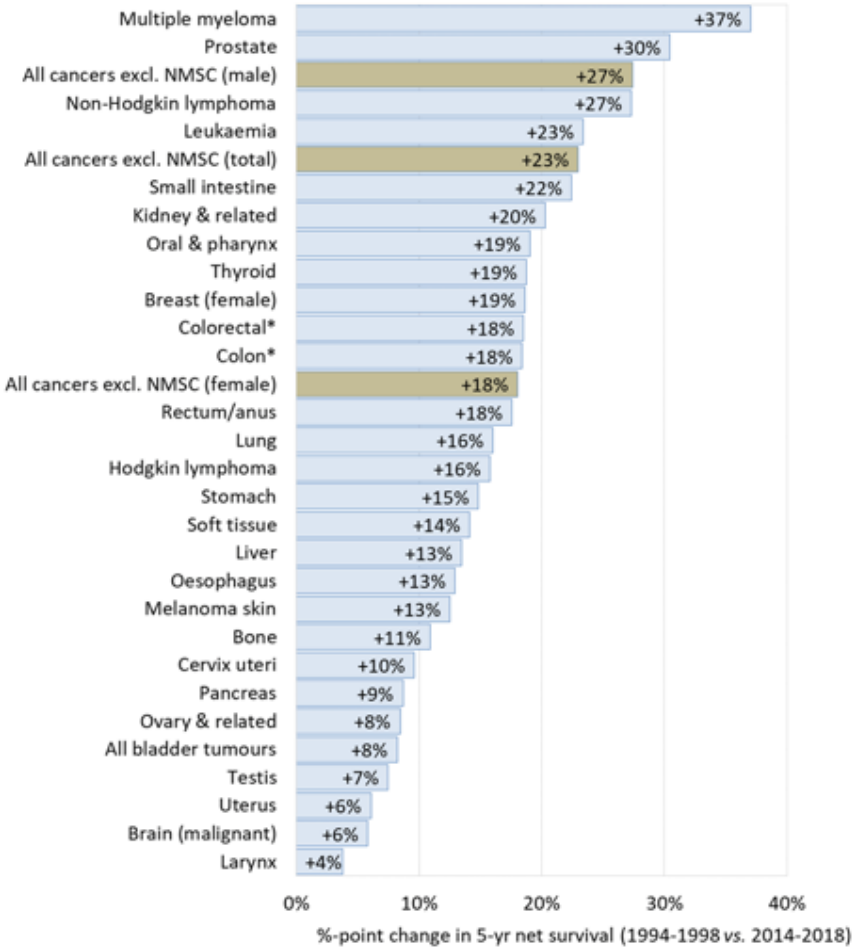
National Cancer Registry Ireland

SURVIVAL IN IRISH CANCER PATIENTS RANKED BY (A) RECENT SURVIVAL OR (B) SURVIVAL IMPROVEMENTS

(A) Age-standardised 5-year net survival, 2014-2018 diagnosis period



(B) Change in 5-year net survival: 1994-1998 *vs.* 2014-2018

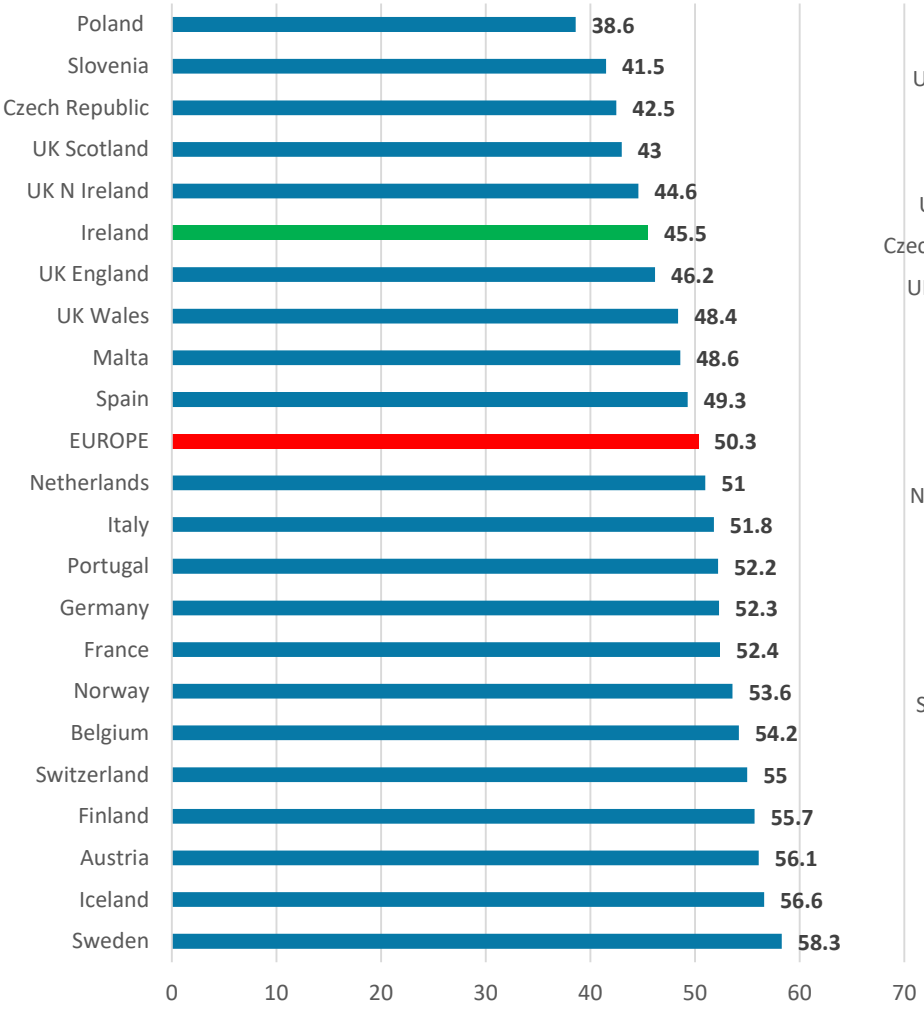


*excluding carcinoid tumours of appendix

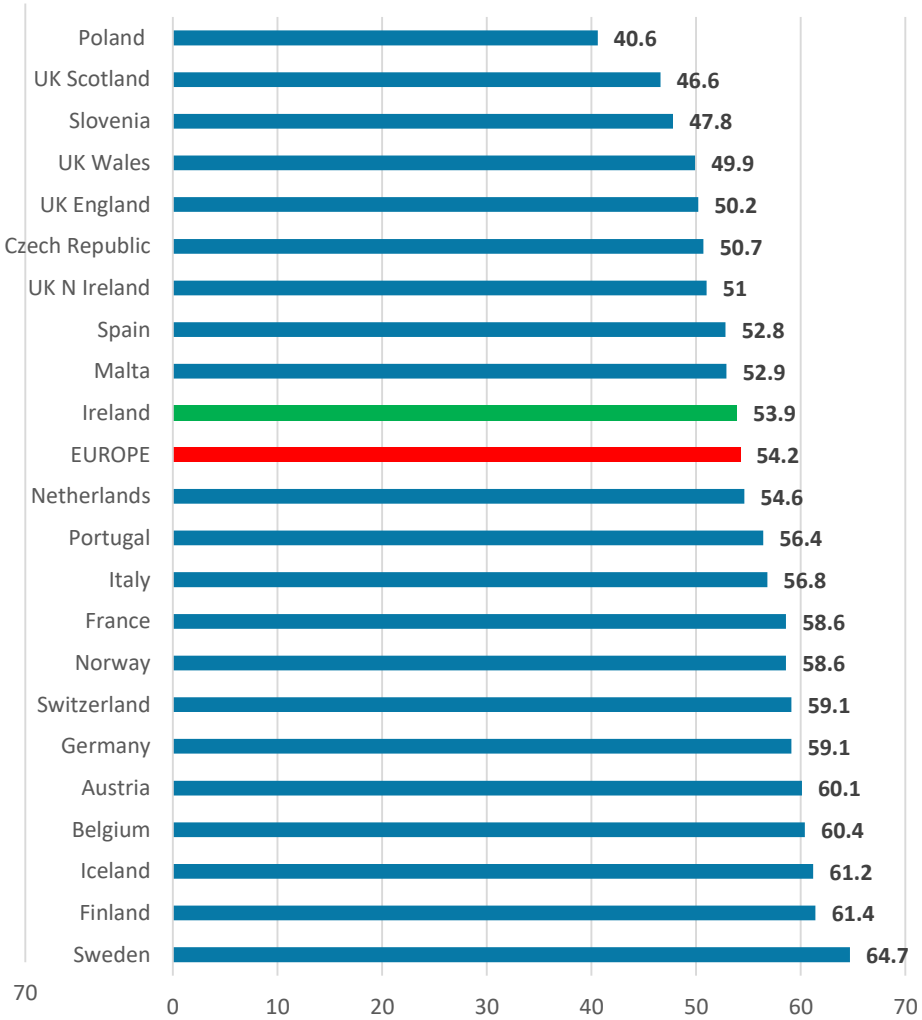
European Cancer Survival
1994 – 1999 and 2000 - 2007

National Cancer Registry Ireland

EUROCARE4

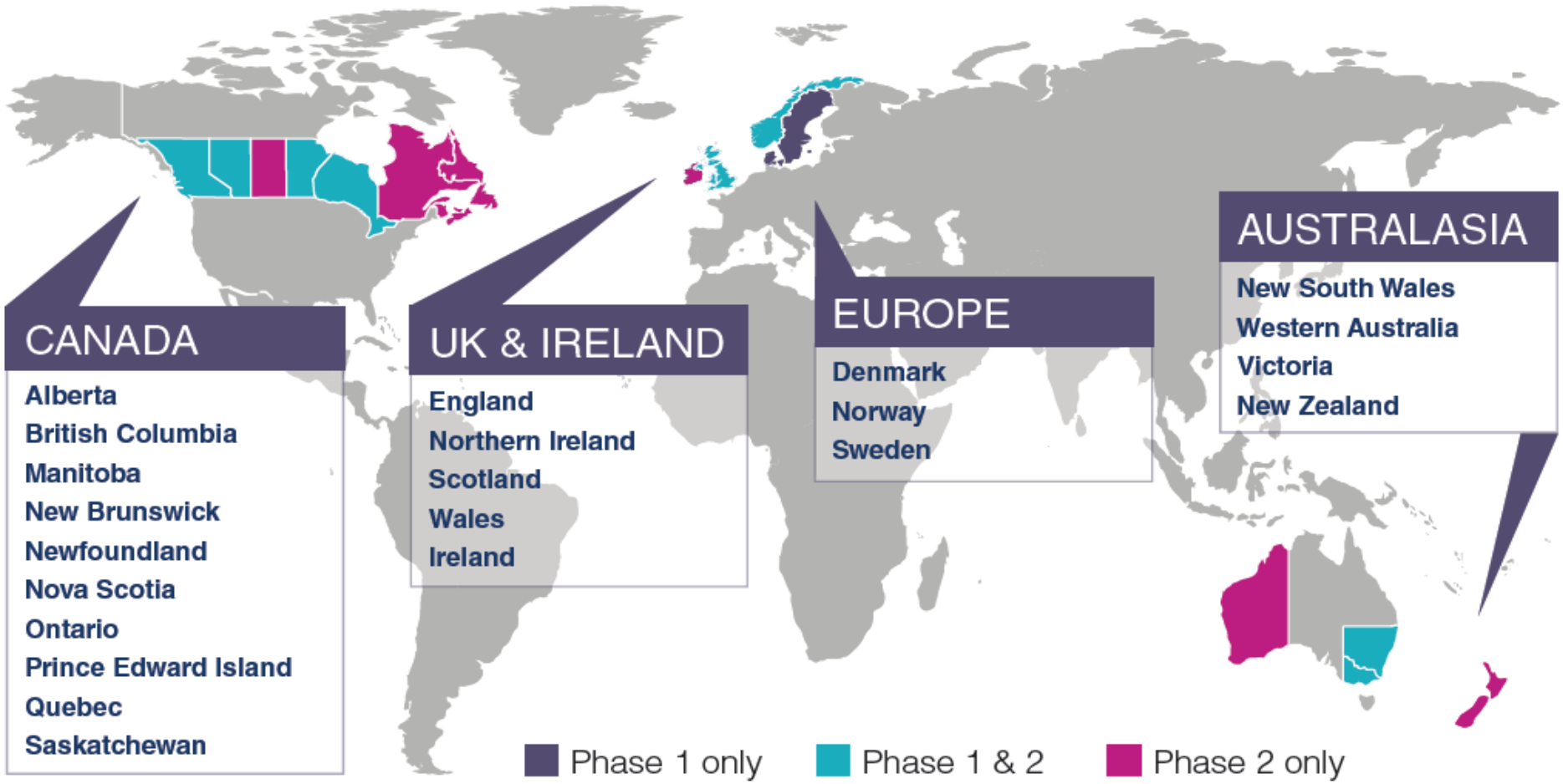


EUROCARE5



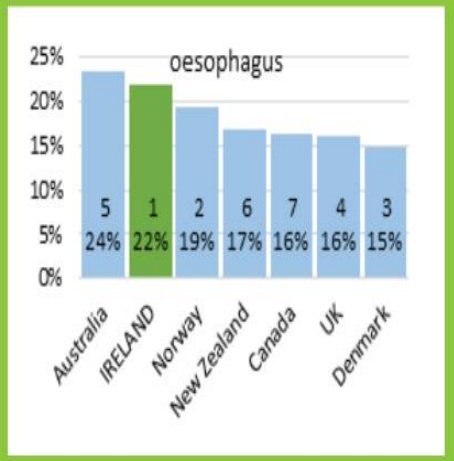
2010 - 2014

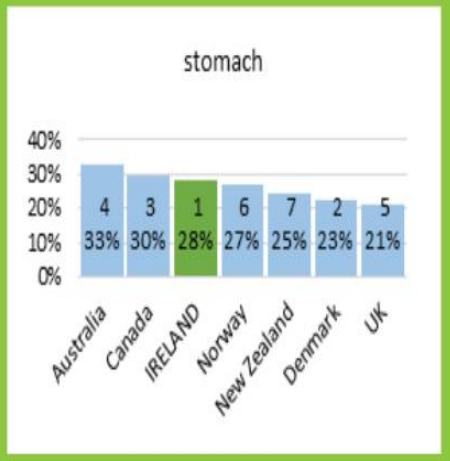
ICBP
International Cancer Benchmarking Partnership

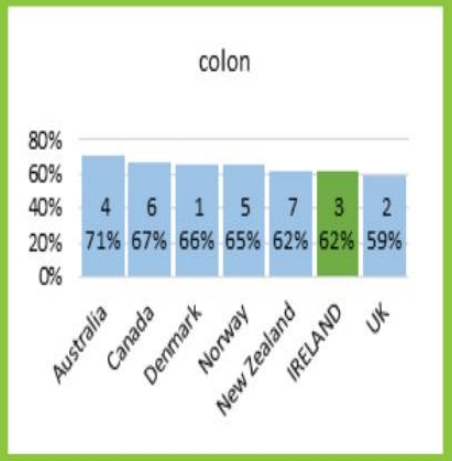


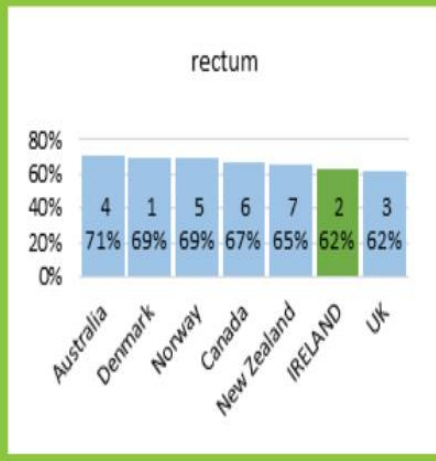
ICBP cancer survival
international comparisons

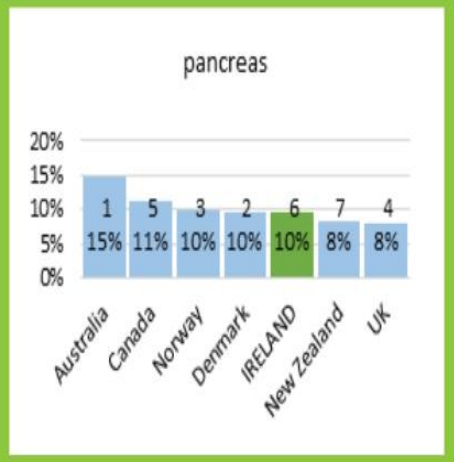
National Cancer Registry Ireland

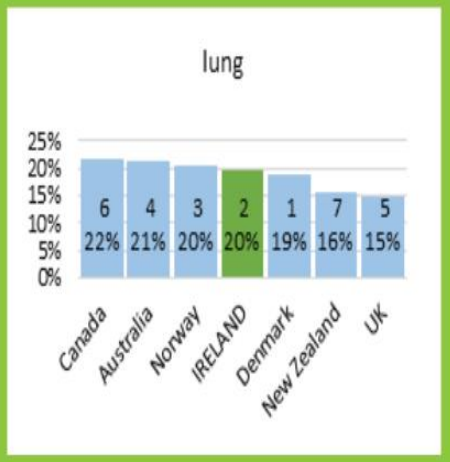


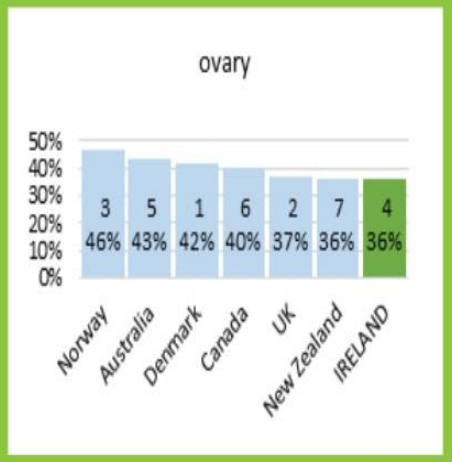












The numbers above the percentages show how countries ranked for the improvement between diagnosis period 1995-1999 & 2010-2014

European Cancer Inequalities Registry

Country Cancer Profiles 2023

National Cancer Registry Ireland

Figure 11. Ireland's cancer survival rates outperform most EU averages

Prostate cancer	Childhood leukaemia	Breast cancer	Cervical cancer	Colon cancer	Lung cancer
Ireland: 91%	Ireland: 88%	Ireland: 82%	Ireland: 64%	Ireland: 61%	Ireland: 18%
EU24: 87%	EU24: 82%	EU24: 83%	EU24: 64%	EU24: 60%	EU24: 15%

Note: Data refer to people diagnosed between 2010 and 2014. Childhood leukaemia refers to acute lymphoblastic cancer.
Source: CONCORD Programme, London School of Hygiene and Tropical Medicine.

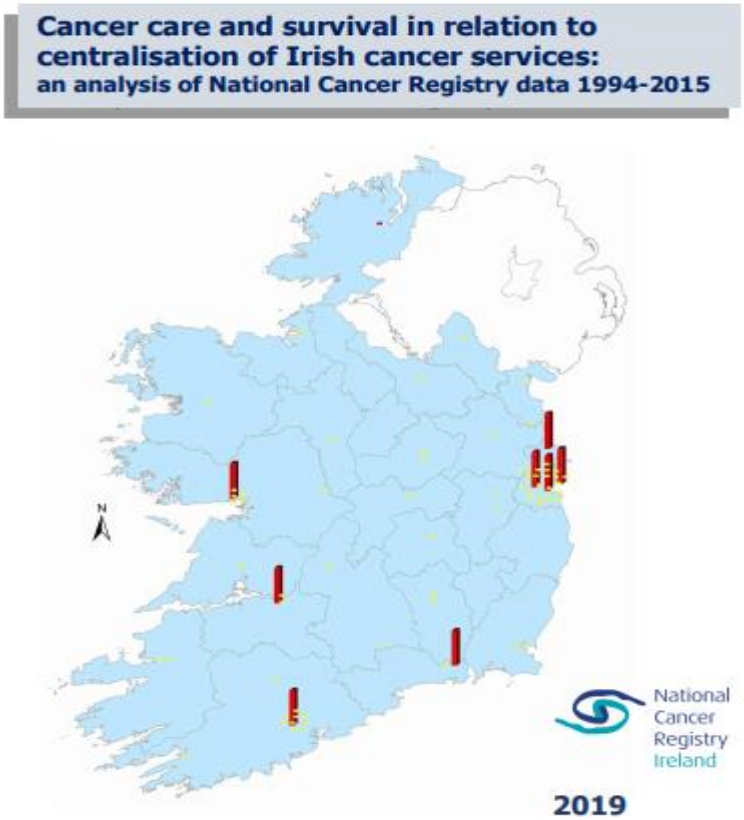
National Cancer Registry Ireland

National Cancer Control Programme

Network	Cancer Centres
HSE Dublin – North East	Beaumont Mater
Dublin – Mid Leinster	St. James St. Vincents
HSE South	Cork University Hospital Waterford Regional
HSE West	UCH Galway Limerick Regional

Centralisation of services

National Cancer Registry Ireland



- Evidence of centralisation
- More likely to receive oncological treatment
- Higher survival outcomes

Conclusions

National Cancer Registry Ireland

- Significant progress in cancer control up to the end of 2019
- Five-year survival now averaging 65% (2014 – 2018)
- Most cancers showing static or declining trends in both incidence and mortality
- Ireland's cancer control is improving at a faster rate than many of its European counterparts
- Further work to be done to match best performing countries