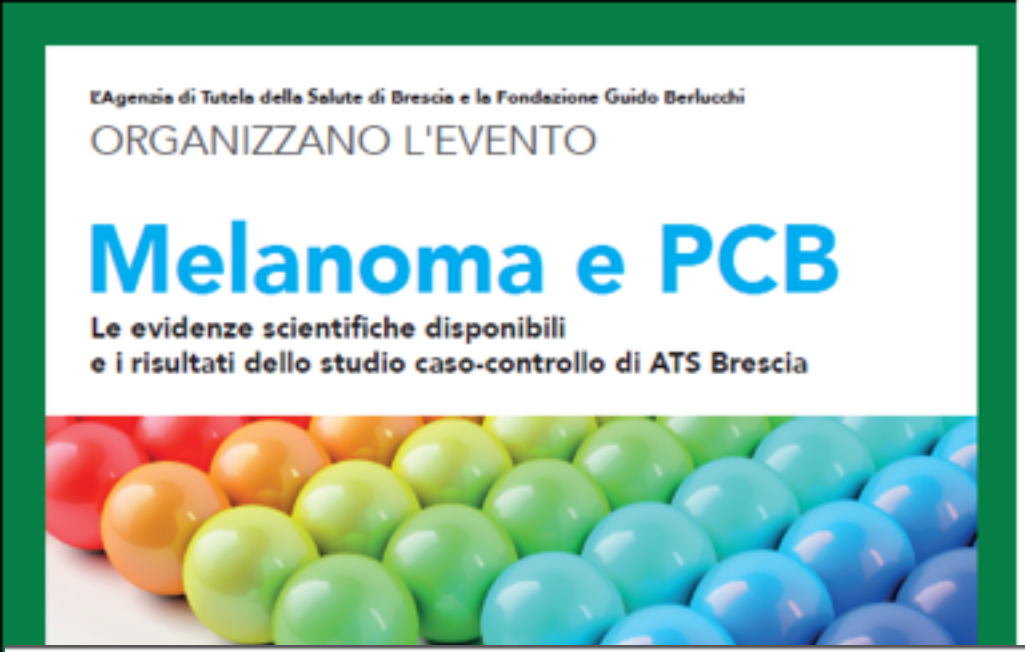
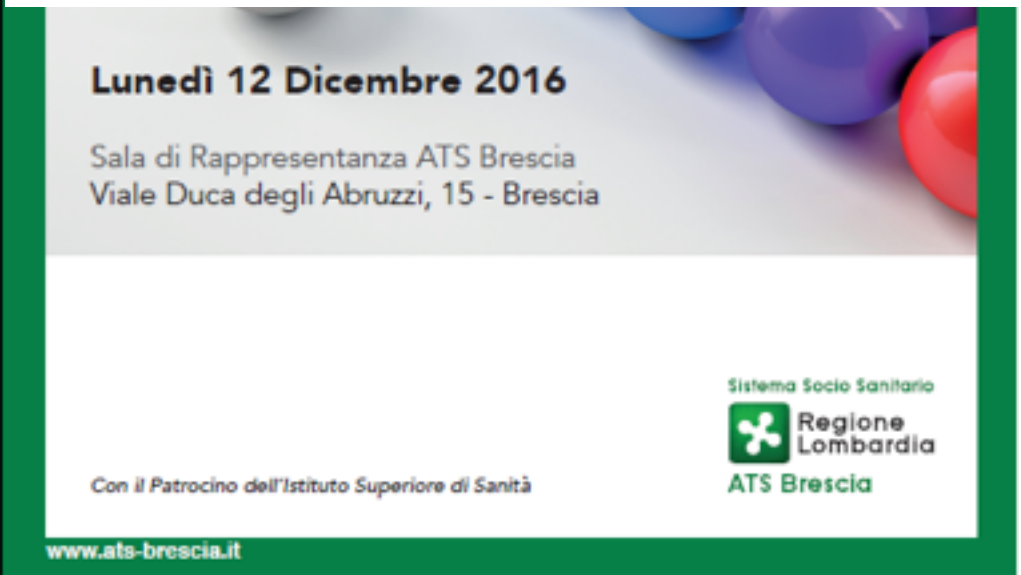


Il melanoma: inquadramento epidemiologico di una patologia in crescita e fattori di rischio noti

Emanuele Crocetti



List of Classifications by cancer sites with *sufficient* or *limited evidence* in humans, Volumes 1 to 117*

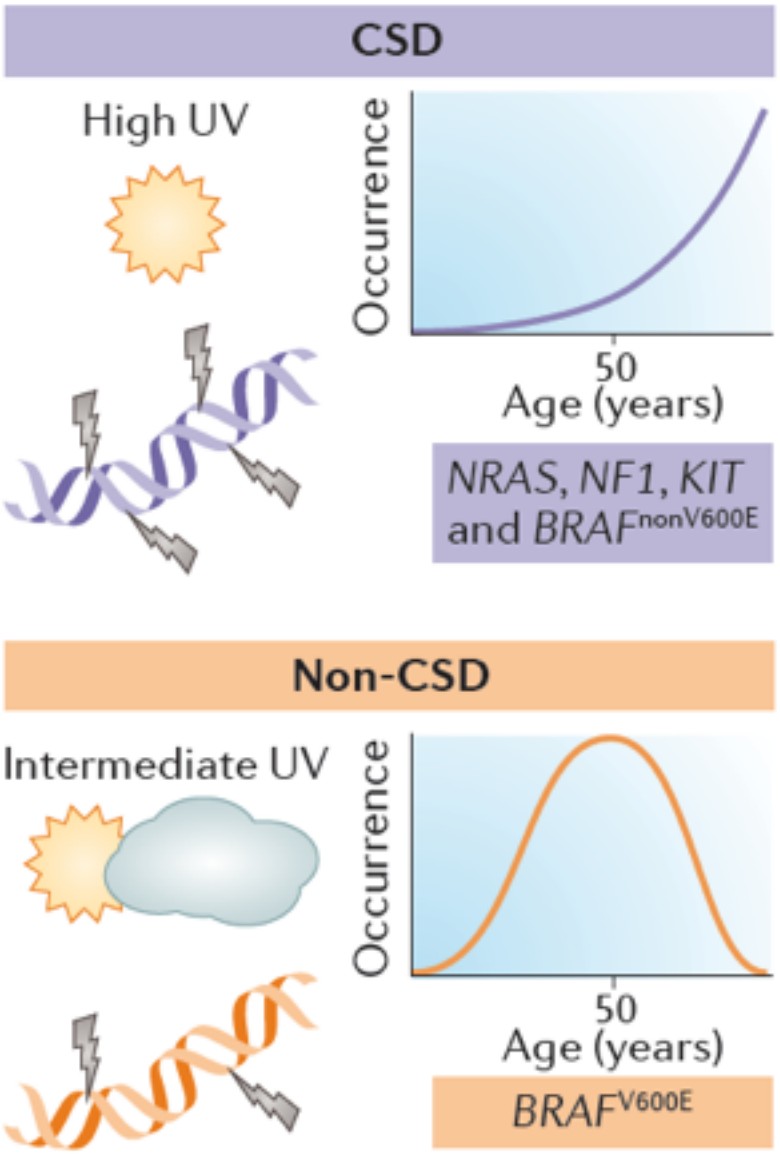
Cancer site	Carcinogenic agents with *sufficient evidence* in humans	Agents with *limited evidence* in humans
Skin (melanoma)	Solar radiation Ultraviolet-emitting tanning devices Polychlorinated biphenyls	

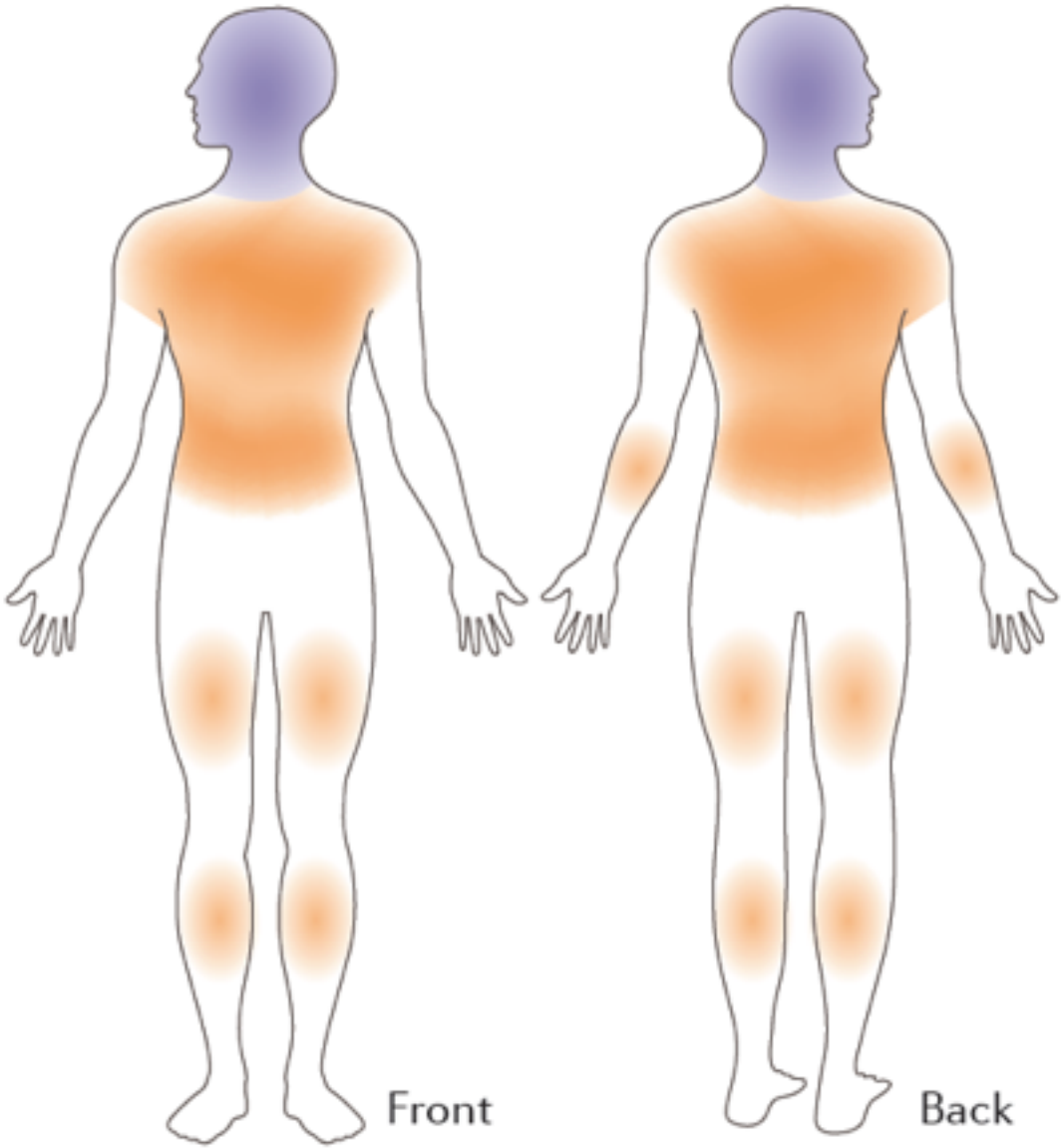
International Agency Research on Cancer

World Health Organization

From melanocytes to melanomas

A. Hunter Shain[1] and Boris C. Bastian[2]





melanoma, precursor lesion or cell of origin) is described in detail in this Review article, where we refer to its depiction in the figure using the notation steps 1–12, represented in the figure by circled numbers. CSD, chronically sun damaged.

From melanocytes to melanomas

A. Hunter Shain[1] and Boris C. Bastian[2]

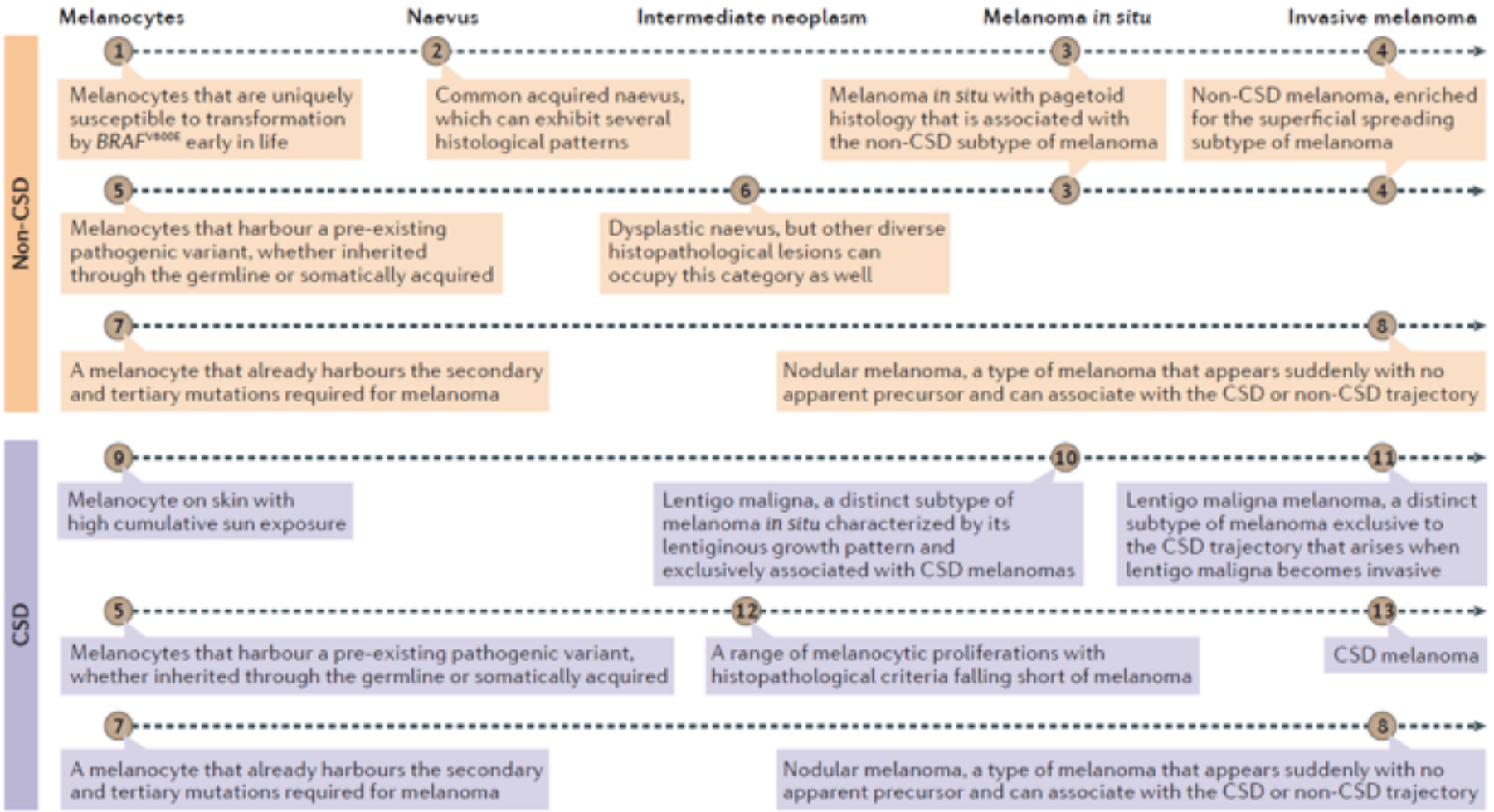
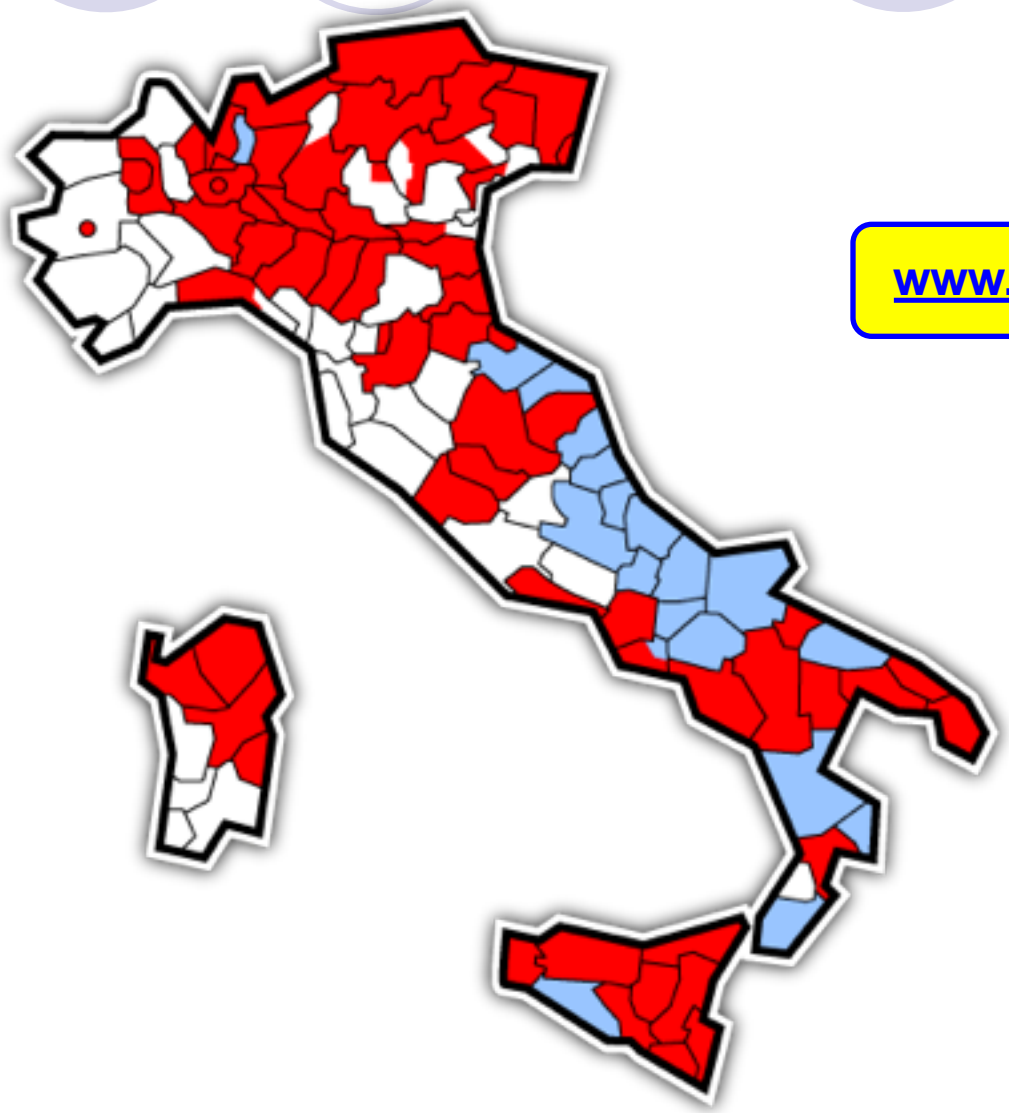


Figure 3 | **Common melanoma progression trajectories.** The relationship between clinically distinct melanomas, their precursors and their cells of origin as inferred from histopathological, clinical and genetic observations. Each entity (type of melanoma, precursor lesion or cell of origin) is described in detail in this Review article, where we refer to its depiction in the figure using the notation steps 1–12, represented in the figure by circled numbers. CSD, chronically sun damaged.

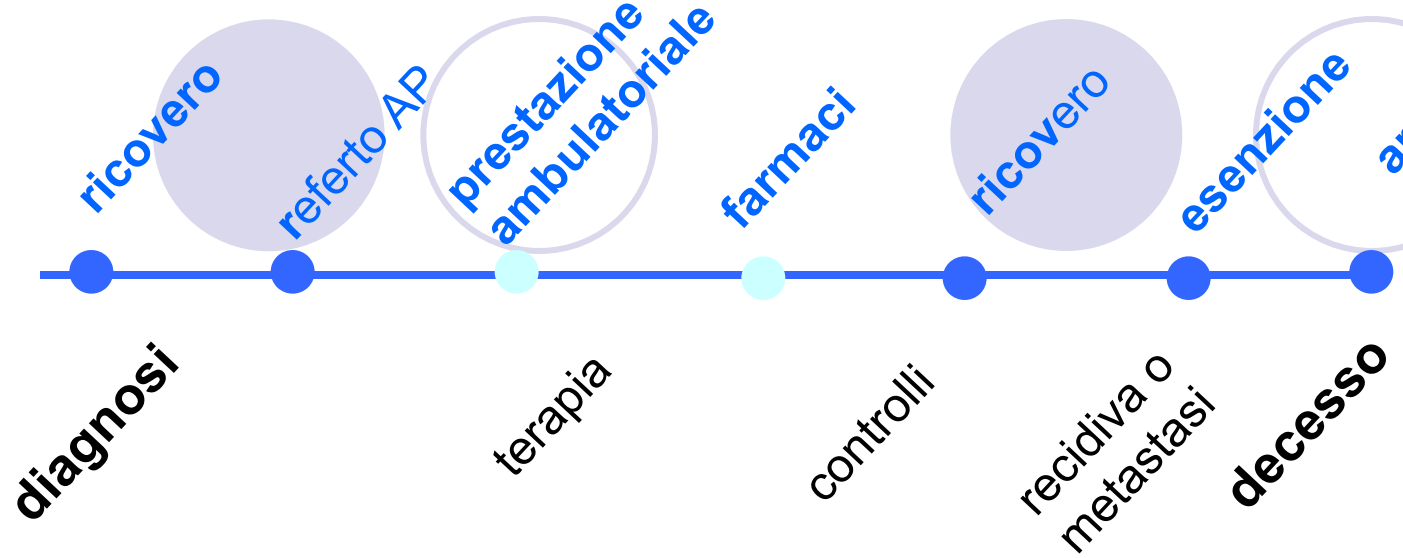
From melanocytes to melanomas

A. Hunter Shain[1] and Boris C. Bastian[2]

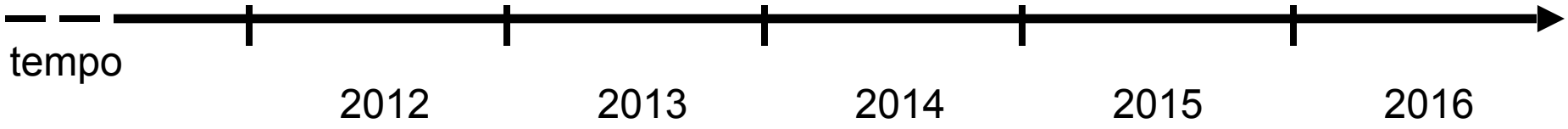
I registri tumori: Italia



www.registri-tumori.it



Costruiscono, secondo regole internazionali, delle storie individuali di malattia di soggetti appartenenti ad una popolazione nota



Dati di popolazione sui 'melanomi'

Incidenza

Sopravvivenza
Prevalenza

Mortalità

Esposizione passata
Interventi di prevenzione primaria e secondaria

Efficacia dei trattamenti
Interventi di prevenzione secondaria (sovradiagnosi)

I NUMERI DEL CANCRO IN ITALIA 2016

Sede	N. di soggetti	
	Maschi	Femmine
Vie aero-digestive superiori*	7.100	2.200
Esofago	1.500	600
Stomaco	7.400	5.300
Colon-retto	29.500	22.900
Colon	20.700	16.400
Retto	8.800	6.500
Fegato	8.800	4.000
Colecisti e vie biliari	2.300	2.400
Pancreas	6.500	7.000
Polmone	27.800	13.500
Osso	400	300
Cute (melanomi)	7.200	6.600
Mesotelioma	1.500	400
Sarcoma di Kaposi	700	200
Tessuti molli	1.200	900
Mammella	500	50.200
Utero cervice	0	2.200
Utero corpo	0	8.200
Ovaio	0	5.200
Prostata	34.400	0
Testicolo	2.500	0
Rene, vie urinarie**	8.900	4.500
Parenchima	7.500	3.900
Pelvi e vie urinarie	1.400	600
Vescica***	21.400	5.200
Sistema nervoso centrale	3.300	2.700
Tiroide	4.300	11.000
Linfoma di Hodgkin	1.200	1000
Linfoma non-Hodgkin	8200	6.100
Mieloma	3.000	2.700
Leucemie	5.200	3.900
Tutti i tumori, esclusi carcinomi della cute	189.600	176.200

TABELLA 5. Numero di nuovi casi tumorali, totale e per alcune delle principali sedi, stimati per il 2016 (popolazione italiana residente da previsioni ISTAT – www.demo.istat.it).

*Comprende lingua, bocca, orofaringe, rinofaringe, ipofaringe, faringe NAS, laringe.
**Comprende rene, pelvi e uretere.
***Comprende sia tumori infiltranti sia non infiltranti.

AIRTUM

1 caso ogni 66 ♂
1 caso ogni 84 ♀

Rango	Maschi	Femmine	Tutta la popolazione
1°	Prostata (19%)	Mammella (30%)	Mammella (14%)
2°	Polmone (15%)	Colon-retto (13%)	Colon retto (13%)
3°	Colon-retto (13%)	Polmone (6%)	Polmone (11%)
4°	Vescica* (11%)	Tiroide (5%)	Prostata (10%)
5°	Stomaco (4%)	Utero corpo (5%)	Vescica (7%)

TABELLA 6. Primi cinque tumori più frequentemente diagnosticati e proporzione sul totale dei tumori (esclusi i carcinomi della cute) per sesso. Pool AIRTUM 2008-2012.

*Comprende sia tumori infiltranti sia non infiltranti.

	Common Types of Cancer	Estimated New Cases 2016	Estimated Deaths 2016
1.	Breast Cancer (Female)	246,660	40,450
2.	Lung and Bronchus Cancer	224,390	158,080
3.	Prostate Cancer	180,890	26,120
4.	Colon and Rectum Cancer	134,490	49,190
5.	Bladder Cancer	76,960	16,390
6.	**Melanoma of the Skin**	**76,380**	**10,130**
7.	Non-Hodgkin Lymphoma	72,580	20,150
8.	Thyroid Cancer	64,300	1,980
9.	Kidney and Renal Pelvis Cancer	62,700	14,240
10.	Leukemia	60,140	24,400

Melanoma of the skin represents 4.5% of all new cancer cases in the U.S.

In 2016, it is estimated that there will be 76,380 new cases of melanoma of the skin and an estimated 10,130 people will die of this disease.

https://seer.cancer.gov/statfacts/html/melan.html

1 caso ogni

322 179 123 236 241 281

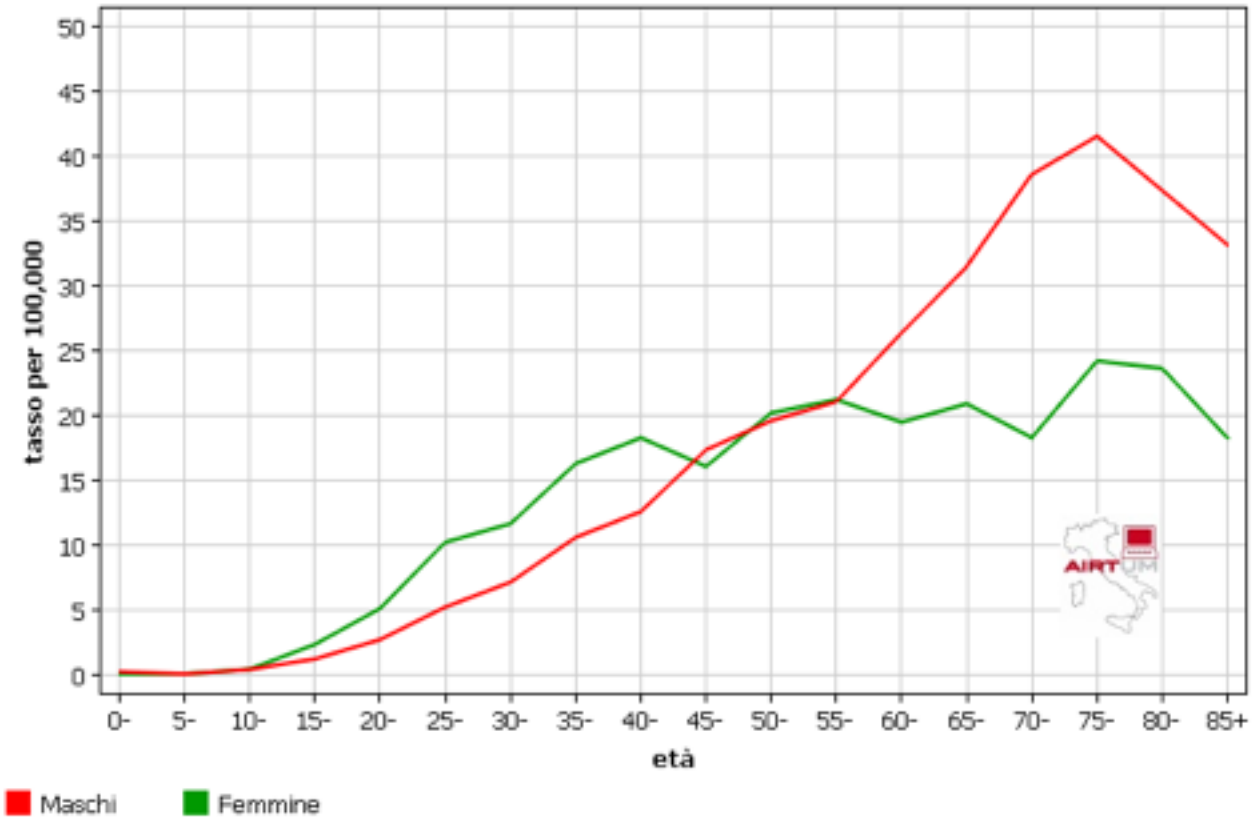
Rango	Maschi			Femmine		
	Età			Età		
	0-49	50-69	70+	0-49	50-69	70+
1°	Testicolo (12%)	Prostata (22%)	Prostata (20%)	Mammella (41%)	Mammella (35%)	Mammella (21%)
2°	Cute (melanomi) (9%)	Polmone (15%)	Polmone (17%)	Tiroide (15%)	Colon-retto (12%)	Colon-retto (17%)
3°	Linfoma non-Hodgkin (8%)	Colon-retto (13%)	Colon-retto (14%)	Cute (melanomi) (7%)	Utero corpo (7%)	Polmone (7%)
4°	Colon-retto (8%)	Vescica* (10%)	Vescica* (12%)	Colon-retto (4%)	Polmone (7%)	Stomaco (5%)
5°	Tiroide (8%)	Vie aero-digestive superiori** (5%)	Stomaco (5%)	Utero cervice (4%)	Tiroide (5%)	Pancreas (5%)

TABELLA 7. Primi cinque tumori in termini di frequenza e proporzione sul totale dei tumori incidenti (esclusi i carcinomi della cute) per sesso e fascia di età. Pool AIRTUM 2008-2012.

*Comprende sia tumori infiltranti sia non infiltranti.

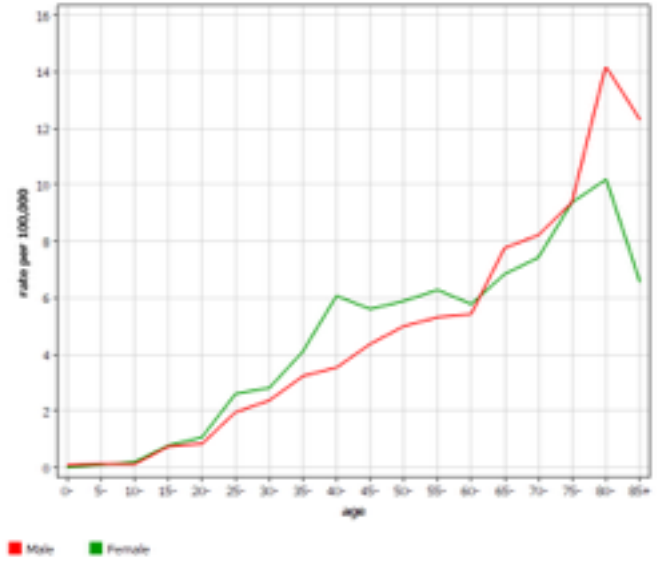
*Comprende lingua, bocca, orofaringe, rinofaringe, ipofaringe, faringe NAS, laringe.

AIRTUM (Pool 38 Registri) 2008-2009-Incidenza
Melanoma della pelle

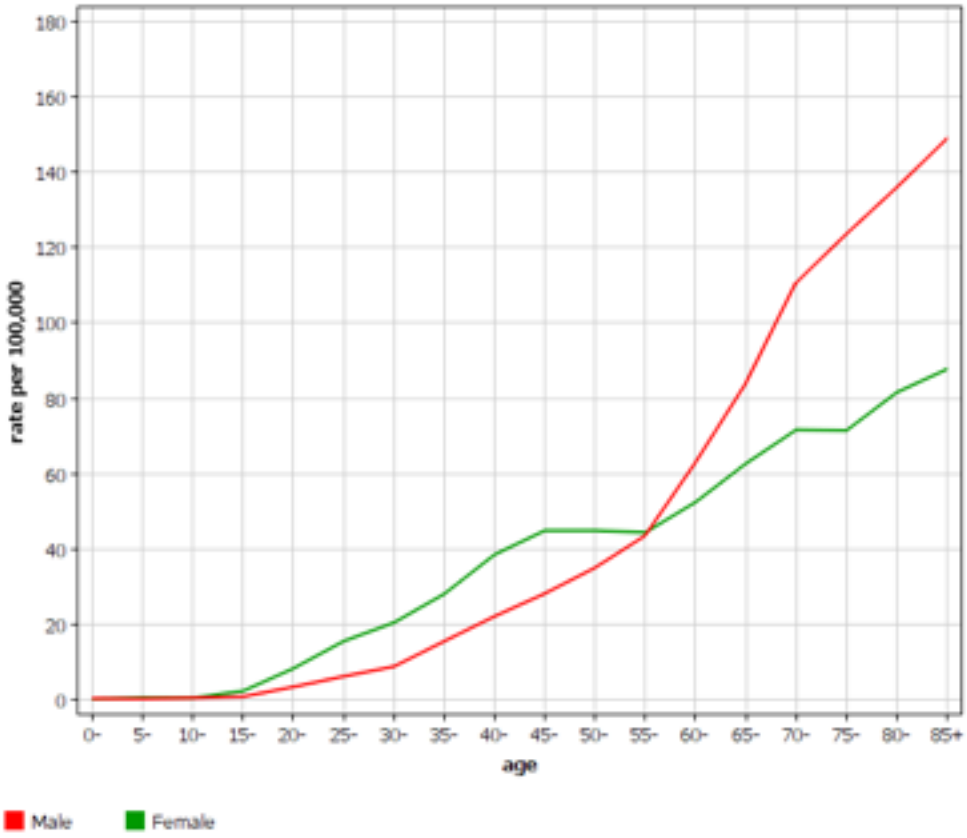


AIRTUM, Associazione Italiana dei Registri TUMori (6.12.2016)

Nordic countries-Incidence (1960-1962)
Melanoma of skin



Nordic countries-Incidence (2013-2014)
Melanoma of skin



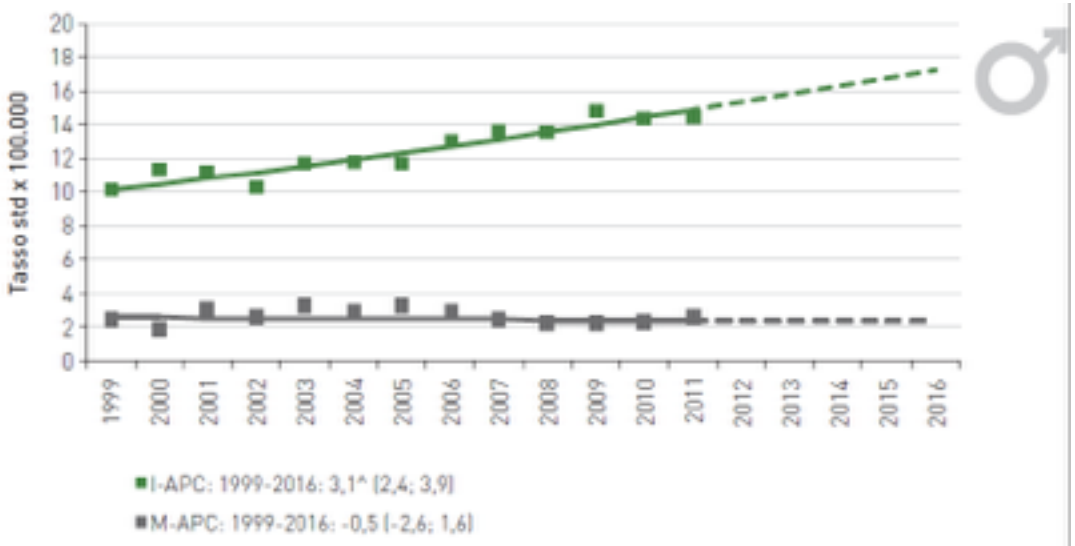
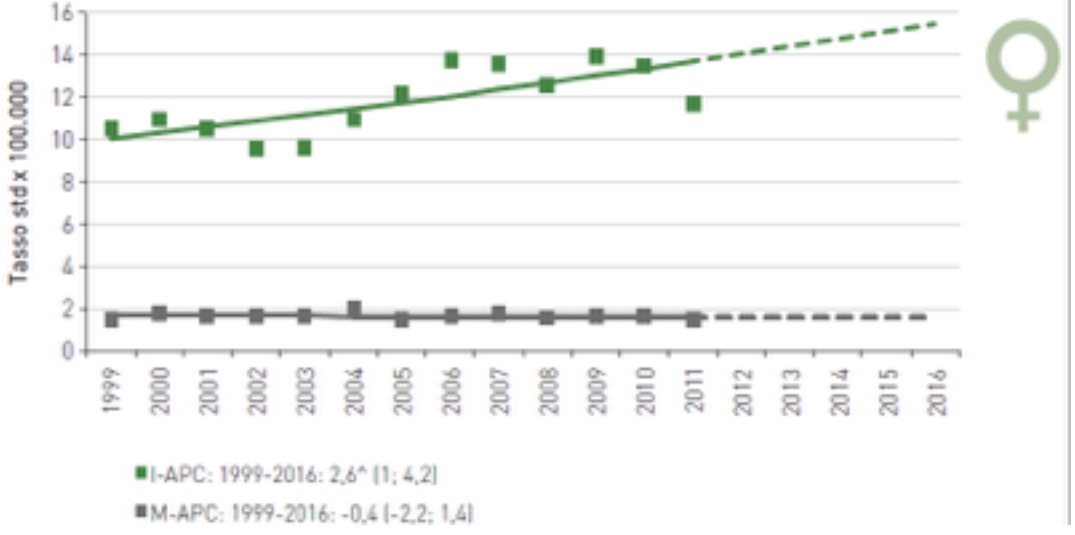
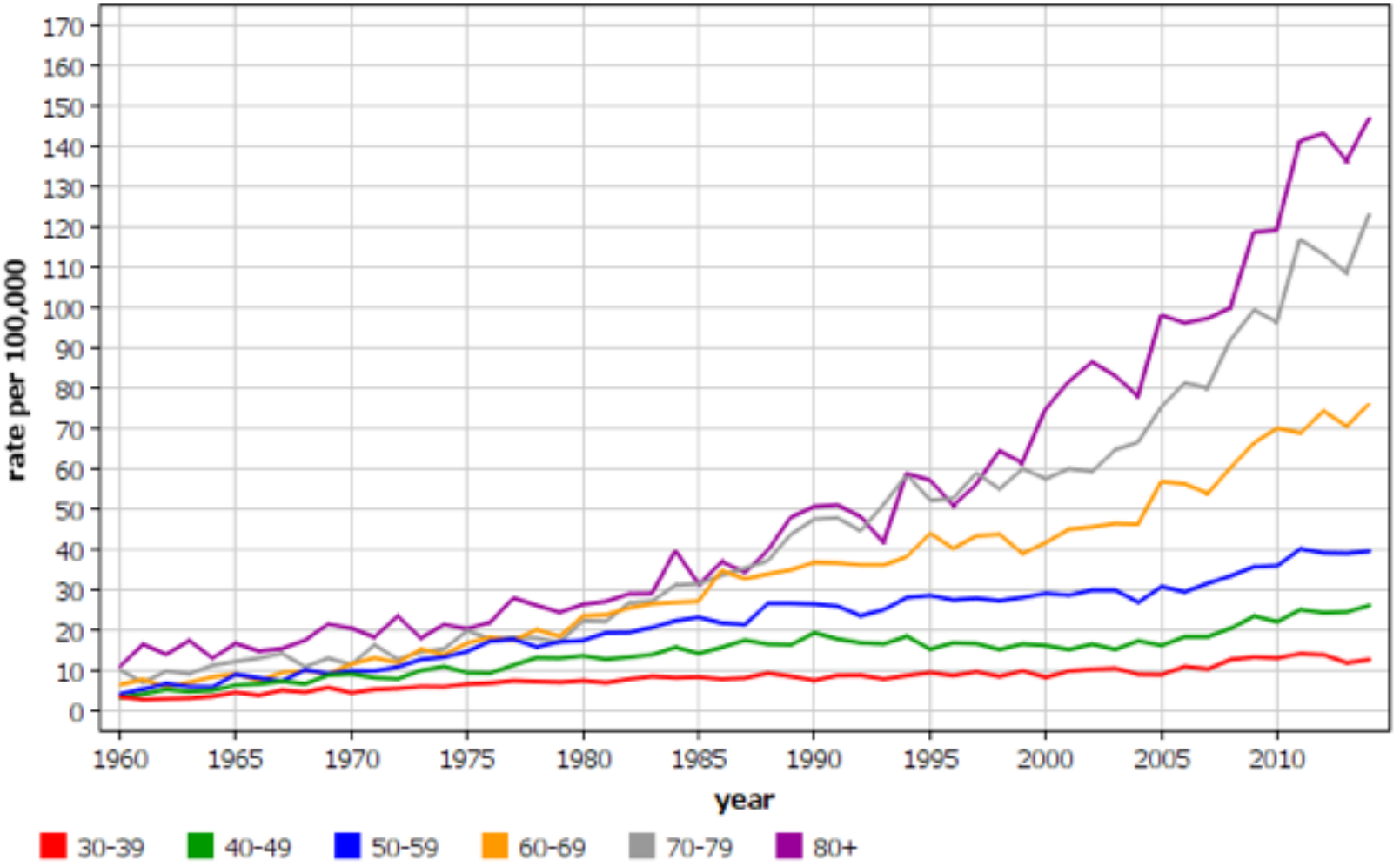


FIGURA 17A. Cute (melanomi), maschi. AIRTUM: stima dei trend tumorali di incidenza e mortalità 1999-2016. Tassi standardizzati popolazione europea. APC = Annual Percent Change (variazione percentuale media annua), I = incidenza, M = mortalità.



Incidence: Nordic countries
Melanoma of skin, Male



Incidence: Nordic countries
Melanoma of skin, Female

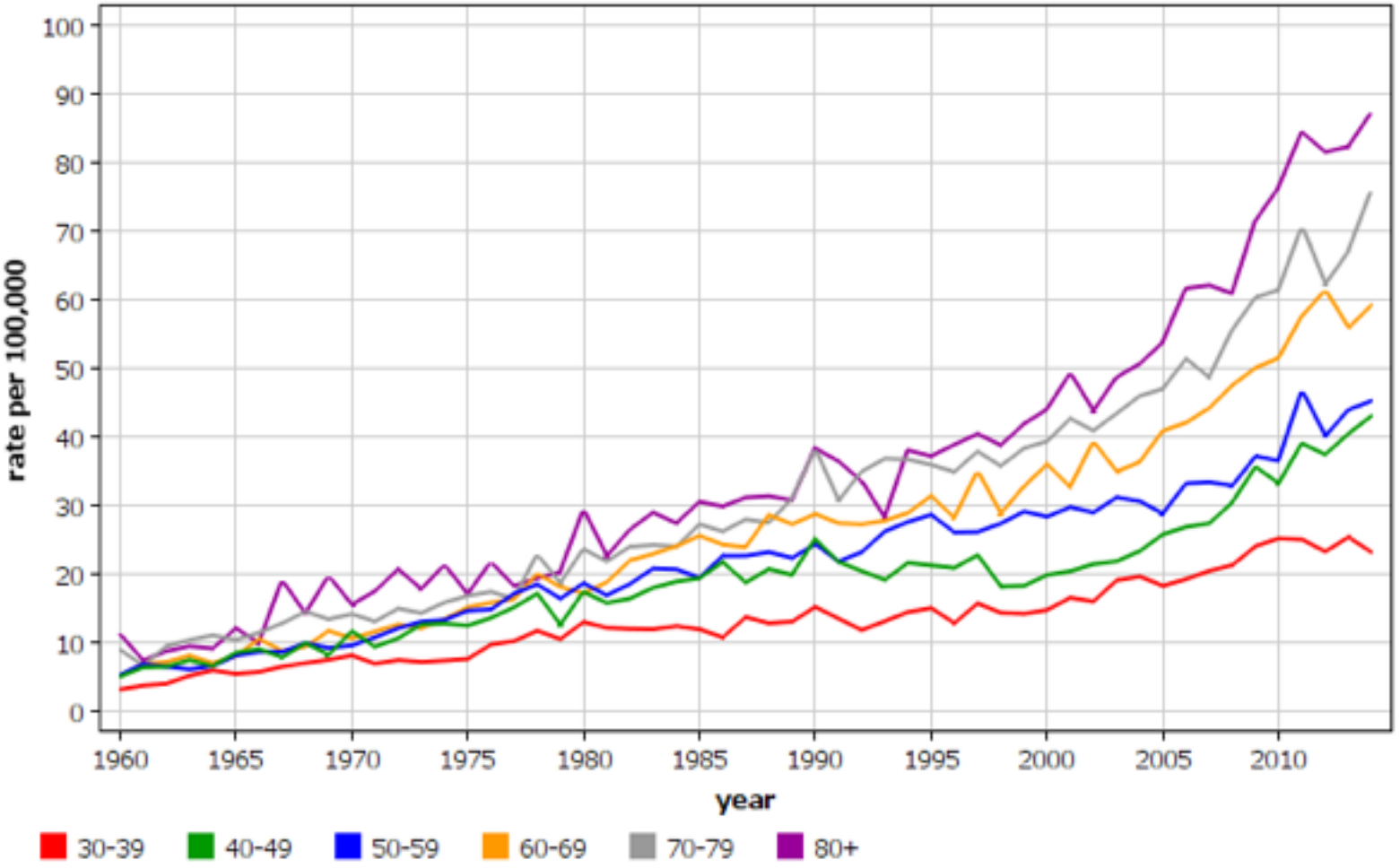


Table 1 Tuscany Cancer Registry: invasive melanoma, absolute numbers, proportion of females, standardized (European population) incidence rates, annual percent change (APC) of standardised rates

	1985–1989	1990–1994	1995–1999	2000–2004	n/p
Invasive melanoma (*n*)	442	565	835	1020	2862
% females	54.5	54.0	55.3	50.2	$P=0.13$
Incidence rate	6.4	8.0	11.4	13.6	$P<0.01$ for APC
Breslow thickness					
>0 to ≤1 mm, *n* (%)	92 (20.8)	182 (32.2)	375 (44.9)	476 (46.7)	1125
Incidence rate	1.4	2.7	5.5	6.7	$P<0.001$ for APC
1.01–2.00 mm (*n*) (%)	76 (17.2)	93 (16.5)	112 (13.4)	129 (12.8)	410
Incidence rate	1.1	1.3	1.5	1.9	$P=0.006$ for APC
>2 mm (*n*, %)	117 (26.5)	134 (23.7)	153 (18.3)	200 (19.6)	604
Incidence rate	1.6	1.8	1.8	2.2	$P=0.016$ for APC
Unknown (*n*, %)	157 (35.5)	156 (27.6)	194 (23.4)	215 (21.0)	723
Incidence rate	2.2	2.2	2.5	2.8	$P=0.07$ for APC
In-situ melanoma (*n*)	55	72	182	296	605
% females	61.8	63.9	52.2	51.4	$P=0.15$
Incidence rate	0.8	1.0	2.7	4.0	$P<0.01$ for APC
Morphology type					
SSM	2.9	4.5	7.3	9.0	<0.001 for APC
NM	0.8	0.8	0.8	0.8	0.96 for APC
LM	0.2	0.2	0.2	0.2	0.14 for APC
Other	0.3	0.3	0.4	0.4	0.15 for APC
N.o.s.	2.2	2.2	2.7	3.2	0.006 for APC

In-situ melanoma, absolute numbers, proportion of females, standardised (European population) incidence rates. Annual percent change of standardized rates (APC) are computed on single years of diagnosis. Probability (*P*) for APC to be equal to 0 or for proportions that each sample has the same proportion of observations.
LM, lentigo melanoma; N.o.s., not otherwise specified; NM, nodular melanoma; SSM, superficial spreading melanoma.

Table 3. Trends in Age-Adjusted Overall Incidence Rate per 100 000 (95% CI) by Subtype in 111 478 Patients in SEER 9 Registries[a]

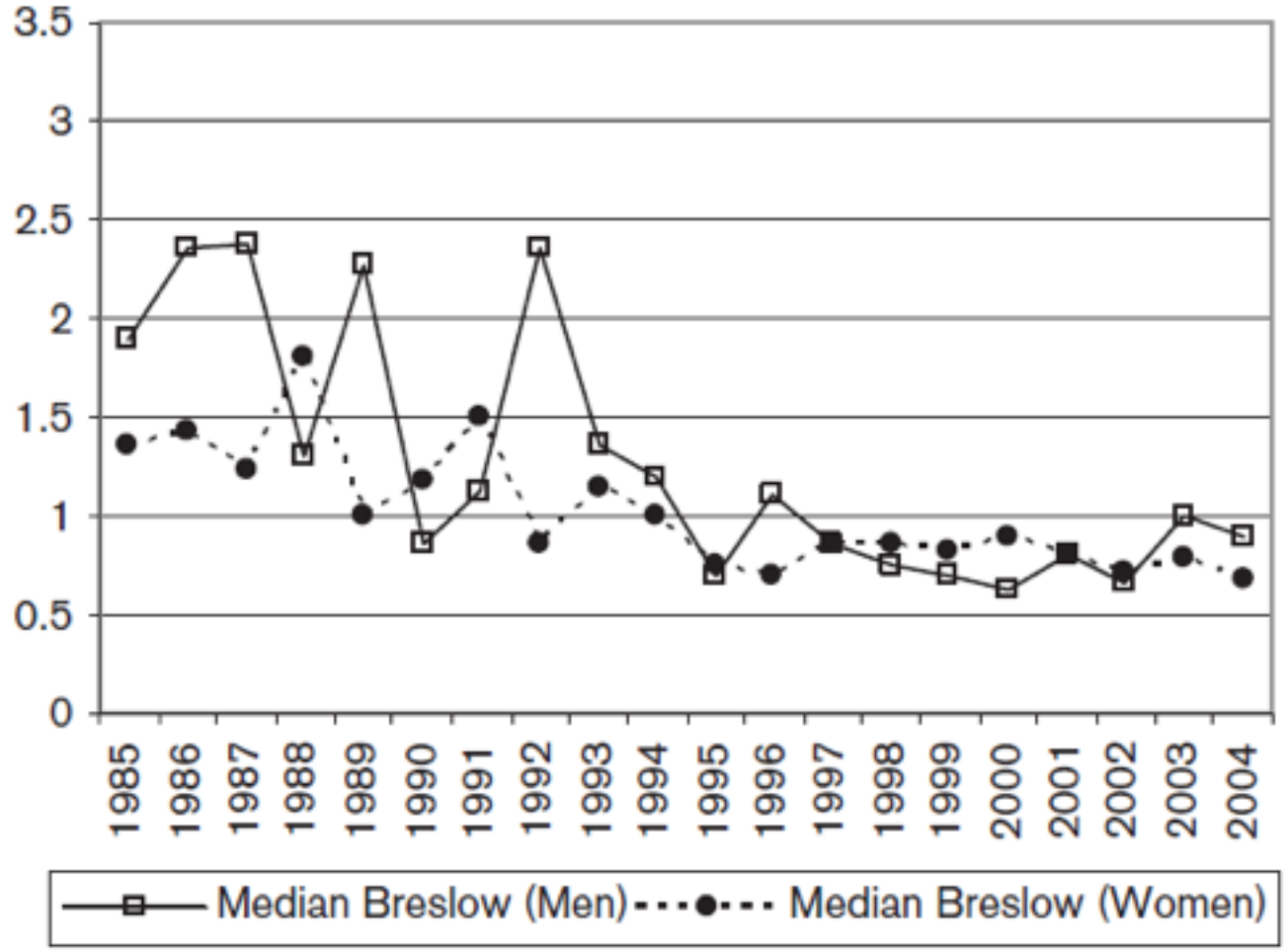
Time Period	SSM	NM	LMM	ALM	AM	Other	NOS	All Subtypes
1978-1982	4.28 (4.15-4.42)	1.30 (1.22-1.38)	0.73 (0.68-0.79)	NA[b]	0.11 (0.09-0.13)	0.12 (0.10-0.15)	3.72 (3.60-3.85)	**10.27** (10.06-10.48)
1983-1987	5.37 (5.22-5.51)	1.30 (1.23-1.37)	0.89 (0.83-0.95)	NA[b]	0.11 (0.19-0.13)	0.20 (0.17-0.23)	4.57 (4.43-4.70)	**12.47** (12.25-12.69)
1988-1992	5.99 (5.85-6.14)	1.23 (1.16-1.30)	0.90 (0.85-0.96)	0.17 (0.14-0.19)	0.09 (0.08-0.11)	0.30 (0.27-0.34)	5.30 (5.17-5.44)	**13.99** (13.77-14.21)
1993-1997	6.76 (6.62-6.91)	1.30 (1.23-1.37)	1.20 (1.14-1.26)	0.19 (0.17-0.22)	0.10 (0.08-0.12)	0.49 (0.45-0.53)	6.32 (6.18-6.46)	**16.36** (16.14-16.60)
1998-2002	7.12 (6.98-7.27)	1.32 (1.26-1.39)	1.46 (1.39-1.52)	0.19 (0.16-0.21)	0.06 (0.05-0.08)	0.65 (0.61-0.70)	7.94 (7.79-8.10)	**18.74** (18.51-18.98)
2003-2007	6.63 (6.50-6.77)	1.32 (1.26-1.38)	1.70 (1.63-1.77)	0.21 (0.19-0.24)	0.07 (0.06-0.09)	0.90 (0.85-0.95)	9.97 (9.80-10.14)	**20.80** (20.56-21.04)

Abbreviations: ALM, acral lentiginous melanoma; AM, amelanotic melanoma; LMM, lentigo maligna melanoma; NA, not applicable; NM, nodular melanoma; NOS, not otherwise specified; SEER, Surveillance, Epidemiology, and End Results; SSM, superficial spreading melanoma.

[a] Cases were followed through 2007.

[b] Data on ALM were collected after 1986.

Arch Dermatol. 2012;148(1):30-36.



Tuscany Cancer Registry. Invasive melanoma: median Breslow thickness for men and women by calendar years.

Table 2 Tuscany Cancer Registry

	1985–1989	1990–1994	1995–1999	2000–2004	*P*
Overall	1.68	1.2	0.8	0.8	<0.001
Males	2.1	1.3	0.8	0.8	<0.001
Females	1.3	1.15	0.8	0.75	<0.001
Breslow's thickness					
≤ 1 mm	0.66	0.57	0.55	0.50	0.001
1.01–2.00 mm	1.50	1.45	1.40	1.30	0.239
>2 mm	3.4	3.5	3.7	3.8	0.418
Morphology type					
SSM	1.20	0.85	0.70	0.68	<0.001
NM	3.33	3.39	3.30	4.00	0.517
LM	1.80	0.81	0.67	0.79	0.398
Other	2.75	3.20	1.10	1.10	0.003
N.o.s.	2.25	2.35	1.79	1.80	0.675

Invasive melanoma: median thickness by period of diagnosis for males and females, for Breslow's thickness categories, for morphology type (LM, lentigo melanoma; N.o.s., not otherwise specified; NM, nodular melanoma; SSM, superficial spreading melanoma) and for site. *P* shows the probability that the medians in different groups are medians of samples drawn from the same population.

Cause di morte	Maschi	Femmine	Totale
TUMORE	98.833	77.384	176.217
Tumori maligni	94.445	73.692	168.137
Tumori maligni di labbra, cavità orale e faringe	1.938	882	2.820
Tumori maligni dell'esofago	1.356	449	1.815
Tumori maligni dello stomaco	5.534	4.061	9.595
Tumori maligni del colon-retto e dell'ano	10.146	8.610	18.756
Tumori maligni del fegato e dei dotti biliari intraepatici	6.417	3.344	9.761
Tumori maligni del pancreas	5.482	5.719	11.201
Tumori maligni della laringe	1.392	156	1.548
Tumori maligni di trachea/bronchi/polmoni	24.599	8.884	33.483
Melanomi maligni della cute	1.111	837	1.948
Tumori maligni del seno	133	11.939	12.072
Tumori maligni della cervice uterina		437	437
Tumori maligni di altre parti dell'utero		2.515	2.515
Tumori maligni dell'ovaio		3.302	3.302
Tumori maligni della prostata	7.203		7.203
Tumori maligni del rene	2.120	1.302	3.422
Tumori maligni della vescica	4.374	1.227	5.601
Tumori maligni dell'encefalo e altro SNC	2.152	1.837	3.989
Tumori maligni della tiroide	215	339	554
Linfomi	2.714	2.324	5.038
Leucemie	3.393	2.690	6.086
Altri tumori maligni del tessuto linfatico/ematopoietico	1.798	1.754	3.552
Altri tumori maligni	12.365	11.084	23.449
Tumori non maligni (benigni o a comportamento incerto)	4.388	3.692	8.080

TABELLA 8. Numero di decessi per causa e per sesso osservati in Italia durante l'anno 2013. ISTAT 2013.

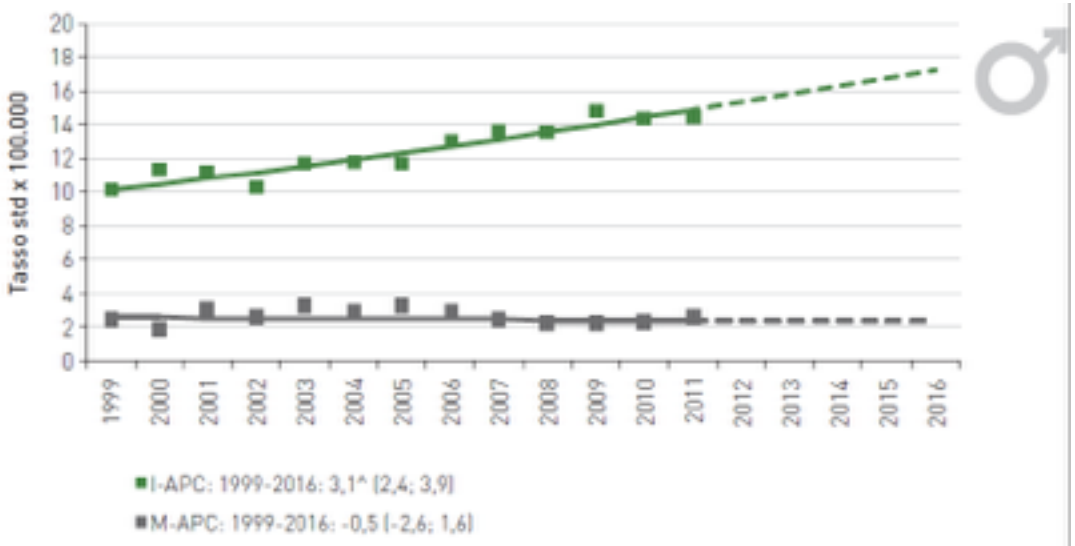


FIGURA 17A. Cute (melanomi), maschi. AIRTUM: stima dei trend tumorali di incidenza e mortalità 1999-2016. Tassi standardizzati popolazione europea. APC = Annual Percent Change (variazione percentuale media annua), I = incidenza, M = mortalità.

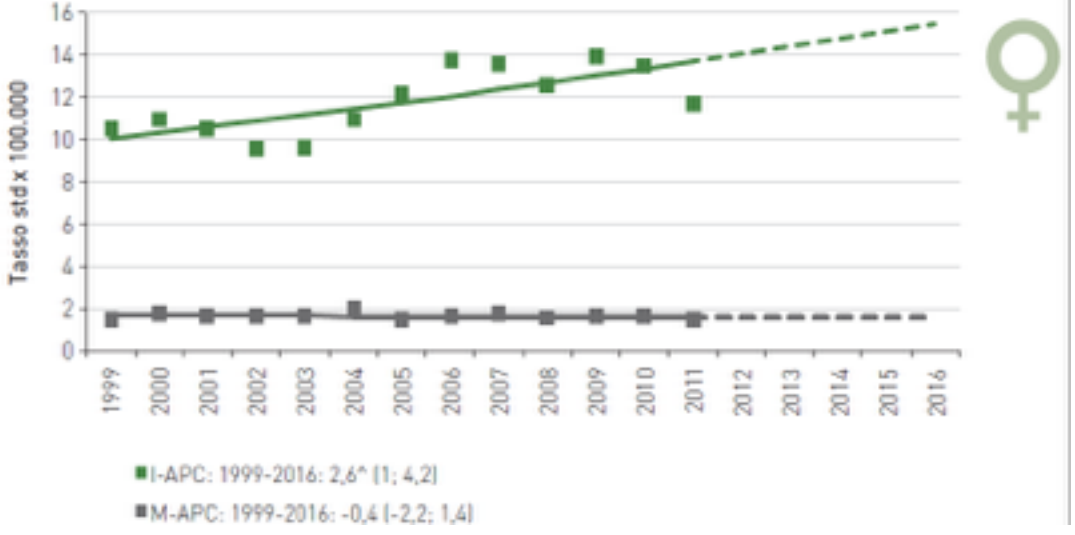


Table 4. Trends in Age-Adjusted Ultimately Fatal Incidence Rate per 100 000 (95% CI) by Subtype in 9904 Patients in SEER 9 Registries[a]

Time Period	SSM	NM	LMM	ALM	AM	Other	NOS	All Subtypes
1978-1982	0.56 (0.51-0.61)	0.46 (0.42-0.51)	0.09 (0.07-0.11)	NA[b]	0.05 (0.04-0.07)	0.03 (0.02-0.05)	1.10 (1.03-1.17)	**2.29** (2.20-2.39)
1983-1987	0.58 (0.53-0.63)	0.45 (0.41-0.50)	0.08 (0.06-0.10)	NA[b]	0.05 (0.04-0.07)	0.04 (0.03-0.06)	1.18 (1.11-1.25)	**2.40** (2.31-2.50)
1988-1992	0.56 (0.52-0.61)	0.39 (0.36-0.43)	0.06 (0.05-0.08)	0.06 (0.04-0.07)	0.05 (0.04-0.06)	0.07 (0.05-0.08)	1.16 (1.09-1.22)	**2.35** (2.25-2.44)
1993-1997	0.51 (0.47-0.55)	0.44 (0.41-0.48)	0.07 (0.06-0.09)	0.05 (0.04-0.07)	0.04 (0.03-0.05)	0.08 (0.06-0.10)	1.13 (1.07-1.19)	**2.32** (2.23-2.41)

Abbreviations: ALM, acral lentiginous melanoma; AM, amelanotic melanoma; CI, confidence interval; LMM, lentigo maligna melanoma; NA, not applicable; NM, nodular melanoma; NOS, not otherwise specified; SEER, Surveillance, Epidemiology, and End Results; SSM, superficial spreading melanoma.

[a] Cases were followed through 2007.

[b] Data on ALM were collected after 1986.

Arch Dermatol. 2012;148(1):30-36.

Cancer survival in Europe 1999–2007 by country and age: results of EUROCARE-5—a population-based study

*Roberta De Angelis, Milena Sant, Michel P Coleman, Silvia Francisci, Paolo Baili, Daniela Pierannunzio, Annalisa Trama, Otto Visser, Hermann Brenner, Eva Ardanaz, Magdalena Bielska-Lasota, Gerda Engholm, Alice Nennecke, Sabine Siesling, Franco Berrino, Riccardo Capocaccia, and the EUROCARE-5 Working Group**

***Lancet Oncol* 2014; 15: 23–34**

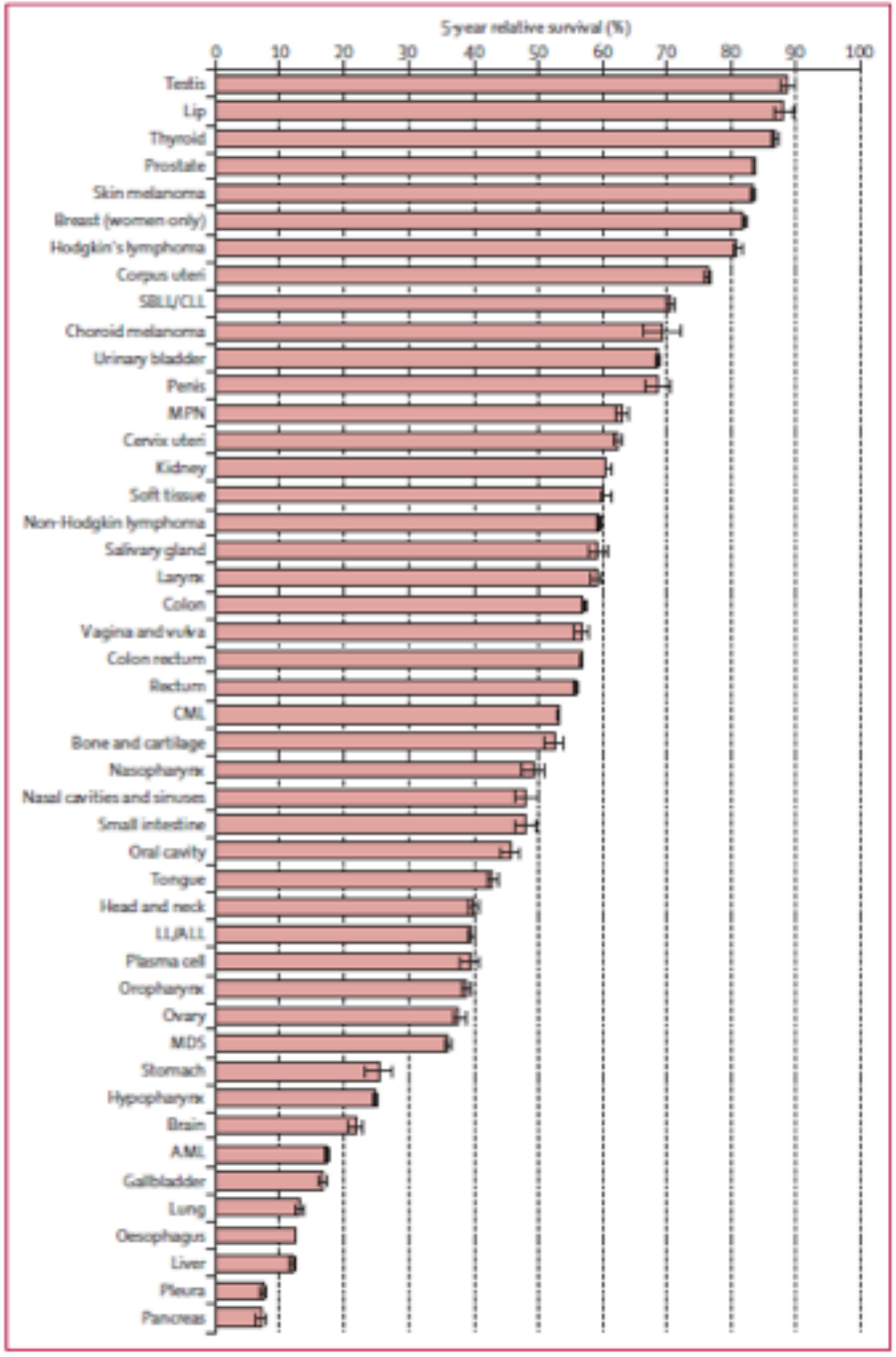
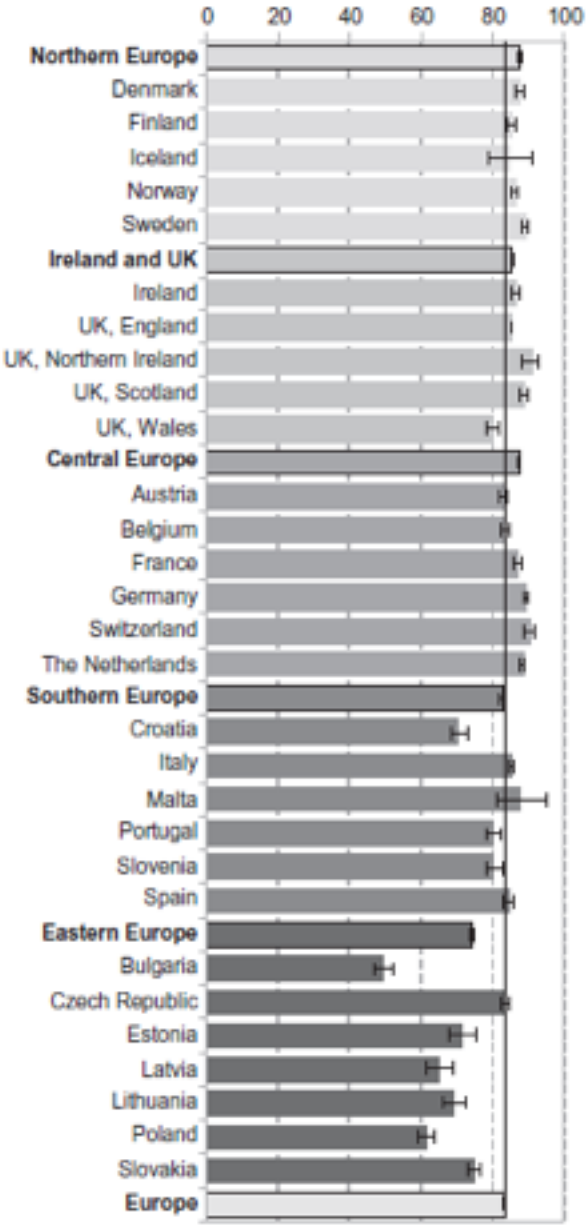


Figure 1: European mean age-standardised 5-year relative survival for adult patients with cancer diagnosed in 2000–2007

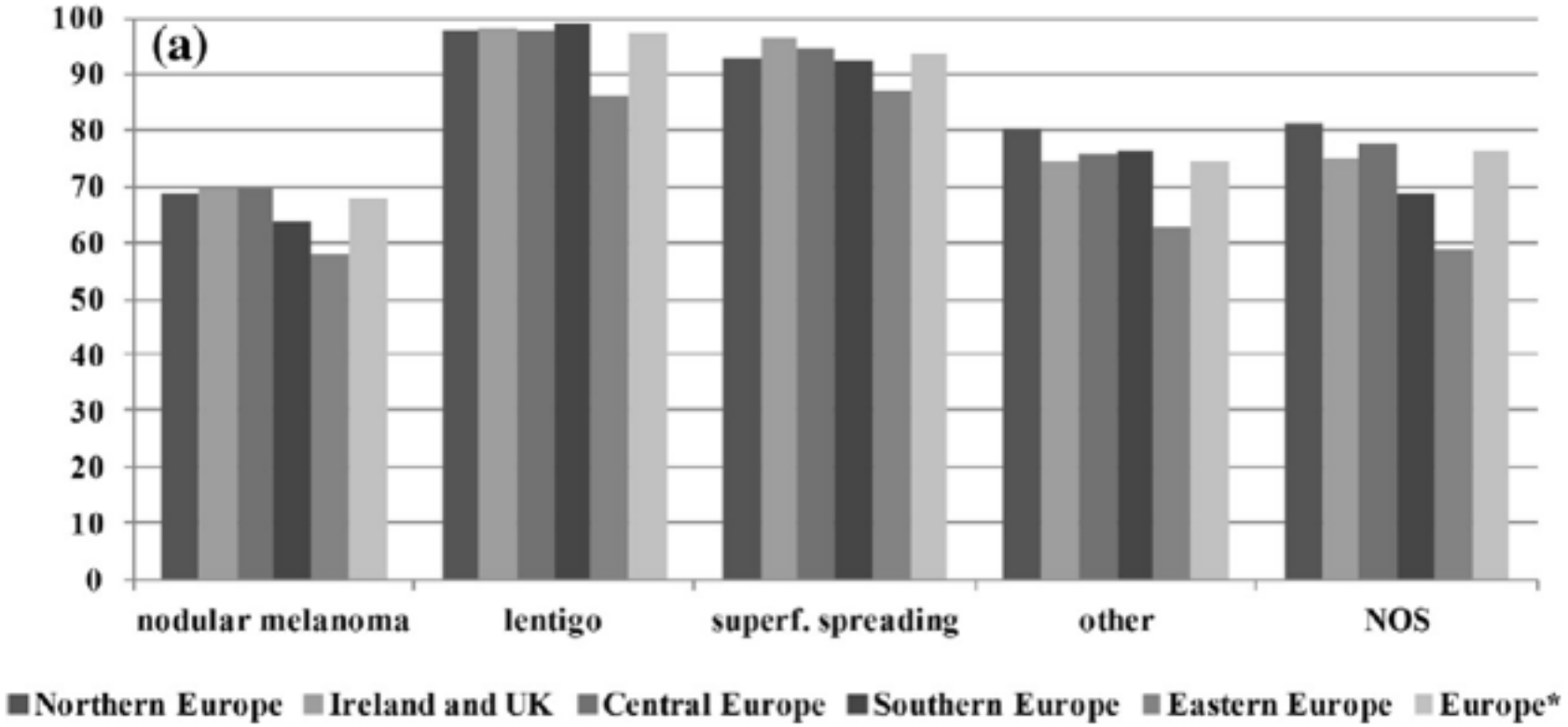
Age-standardised 1-year, 5-year relative survival, and 5-year relative survival conditional to surviving 1 year, with 95% confidence intervals in parentheses

	Number of cases	1-year			5-year			Conditional		
Northern Europe	**40,597**	**97.4**	**97.2-**	**97.5)**	**87.7**	**87.2-**	**88.2)**	**90.1**	**89.6-**	**90.6)**
Denmark	9,654	97.0	96.5-	97.4)	87.8	86.7-	88.9)	90.5	89.5-	91.6)
Finland	6,209	95.9	95.3-	96.5)	85.3	84.1-	86.6)	89.0	87.8-	90.2)
Iceland	404	96.6	94.2-	99.0)	85.0	79.2-	91.2)	88.0	82.4-	93.9)
Norway	8,575	97.1	96.7-	97.6)	86.4	85.4-	87.5)	89.0	87.9-	90.0)
Sweden	15,755	98.3	98.0-	98.6)	89.2	88.5-	90.0)	90.8	90.1-	91.5)
Ireland and UK	**75,761**	**96.2**	**96.0-**	**96.3)**	**85.6**	**85.2-**	**86.0)**	**89.0**	**88.6-**	**89.4)**
Ireland	4,451	96.9	96.3-	97.6)	86.4	84.9-	88.0)	89.2	87.7-	90.7)
UK, England	59,155	96.1	96.0-	96.3)	85.3	84.9-	85.8)	88.8	88.4-	89.2)
UK, Northern Ireland	1,822	97.5	96.6-	98.5)	90.7	88.5-	93.1)	93.0	90.9-	95.3)
UK, Scotland	6,774	97.0	96.5-	97.5)	88.8	87.6-	90.1)	91.5	90.4-	92.7)
UK, Wales	3,559	93.8	92.9-	94.7)	80.0	78.2-	81.9)	85.4	83.6-	87.1)
Central Europe	**68,765**	**96.8**	**96.6-**	**96.9)**	**87.6**	**87.2-**	**88.0)**	**90.5**	**90.2-**	**90.9)**
Austria	8,543	91.7	91.1-	92.3)	83.1	82.0-	84.2)	90.6	89.6-	91.6)
Belgium	6,202	96.2	95.7-	96.8)	83.4	82.1-	84.8)	86.7	85.4-	88.0)
France	4,292	97.8	97.3-	98.4)	87.2	85.9-	88.5)	89.1	87.9-	90.4)
Germany	21,043	97.1	96.8-	97.4)	89.4	88.7-	90.1)	92.1	91.4-	92.7)
Switzerland	4,131	98.3	97.8-	98.8)	90.4	89.0-	91.8)	92.0	90.6-	93.3)
The Netherlands	24,554	98.0	97.8-	98.3)	88.4	87.7-	89.1)	90.2	89.5-	90.8)
Southern Europe	**30,806**	**94.6**	**94.3-**	**94.9)**	**82.6**	**82.1-**	**83.2)**	**87.4**	**86.8-**	**87.9)**
Croatia	3,812	84.9	83.7-	86.1)	70.6	68.6-	72.7)	83.2	81.1-	85.3)
Italy	17,813	96.4	96.1-	96.7)	85.4	84.7-	86.1)	88.6	88.0-	89.3)
Malta	275	98.6	96.5-	100.8)	87.8	81.1-	95.0)	89.0	82.5-	96.0)
Portugal	3,168	93.6	92.7-	94.6)	80.3	78.5-	82.2)	85.8	84.1-	87.5)
Slovenia	2,628	95.7	94.8-	96.6)	80.4	78.2-	82.6)	84.0	81.9-	86.2)
Spain	3,110	96.1	95.3-	96.8)	84.6	83.0-	86.2)	88.1	86.6-	89.6)
Eastern Europe	**25,556**	**91.5**	**91.1-**	**91.9)**	**74.3**	**73.6-**	**75.1)**	**81.2**	**80.5-**	**82.0)**
Bulgaria	2,720	78.9	77.3-	80.6)	49.6	47.1-	52.2)	62.9	60.0-	65.9)
Czech Republic	13,003	95.7	95.3-	96.1)	83.4	82.4-	84.3)	87.1	86.2-	88.1)
Estonia	1,023	93.8	92.1-	95.4)	71.7	68.0-	75.5)	76.5	72.8-	80.3)
Latvia	1,235	86.7	84.7-	88.8)	65.1	61.5-	68.8)	75.0	71.3-	78.9)
Lithuania	1,551	88.7	86.9-	90.4)	69.2	66.2-	72.3)	78.0	75.1-	81.1)
Poland	2,371	84.8	83.3-	86.3)	61.5	59.0-	64.1)	72.6	69.9-	75.3)
Slovakia	3,653	92.2	91.2-	93.2)	74.7	72.8-	76.7)	81.1	79.2-	83.0)
Europe	**241,485**	**95.1**	**94.9-**	**95.3)**	**83.2**	**82.9-**	**83.6)**	**87.5**	**87.2-**	**87.9)**

Age-standardised 5-year relative survival (%)



European Journal of Cancer (2015) **51**, 2179–2190


(a)
100
90
80
70
60
50
40
30
20
10
0
nodular melanoma
lentigo
superf. spreading
other
NOS
Northern Europe
Ireland and UK
Central Europe
Southern Europe
Eastern Europe
Europe*

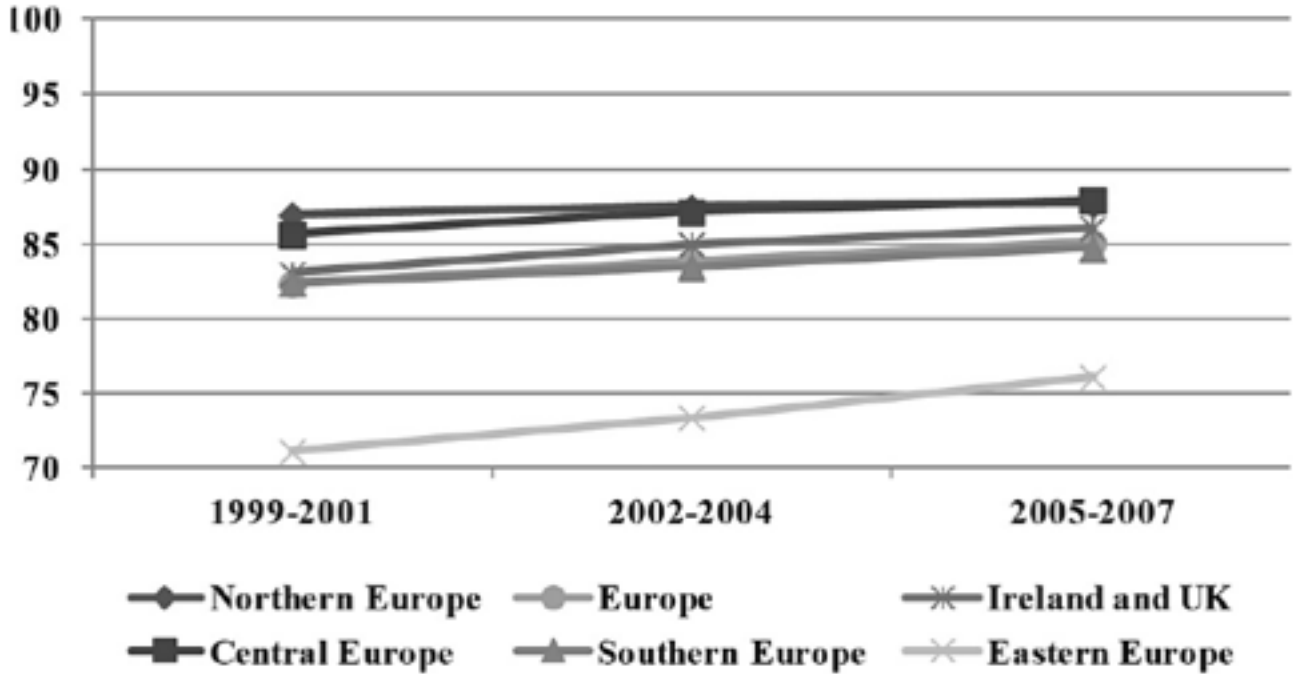


Fig. 4. Time trends in age-standardised 5-year relative survival over the period 1999–2007, by European region and overall.

Table 3: Gender differences in European mean five-year relative survival (%) for adult cancer patients diagnosed in 2000-2007 (with 95% confidence intervals). European mean figures are population-weighted means of the country-specific relative survival estimates.

Cancer	Men	Women	absolute difference (p-value)
Stomach cancer	23·7 (23·4–24·1)	27·7 (27·2–28·2)	4·0 (<0·0001)
Colon cancer	56.39 (56.05-56.73)	57.81 (57.48-58.15)	1·4 (<0·0001)
Rectal cancer	54·9 (54·3–55·3)	57·3 (56·8–57·7)	2·4 (<0·0001)
Lung cancer	12·0 (11·8–12·1)	15·9 (15·6–16·2)	3·9 (<0·0001)
Skin melanoma	79·2 (78·6–79·7)	86·6 (86·1–87·0)	7·4 (<0·0001)
Breast cancer	na	81.78 (81.59-81.98)	na
Ovarian cancer	na	37.60 (37.15-380.05)	na
Prostate cancer	83.36 (83.11-83.62)	na	na
Kidney cancer	59·8 (59·3–60·3)	62·3 (61·7–62·9)	2·5 (<0·0001)
Non-Hodgkin lymphoma	57·2 (56·7-57·6)	61·9 (61·5-62·4)	4·7 (<0·0001)

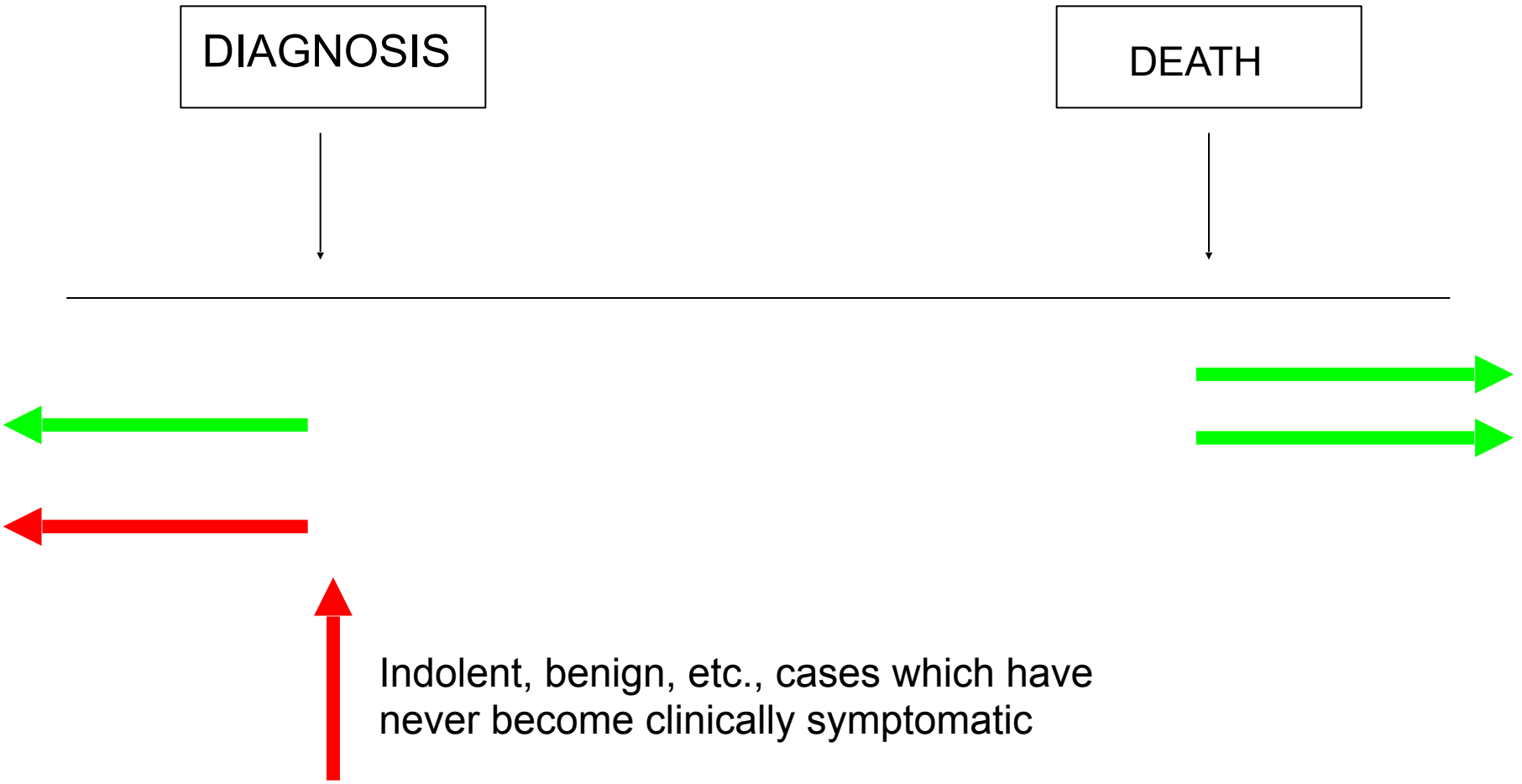
Lancet Oncol 2014; 15: 23–34

			Crude				Adjusted			
Variable		n = 3900	HR	95% CI		p-value	HR	95% CI		p-value
Sex	male	47%	ref.				ref.			
	female	53%	0.62	0.53	0.72	<0.0001	0.66	0.56	0.79	<0.0001
Age (years, linear)			1.03	1.03	1.03	<0.0001	1.02	1.01	1.02	<0.0001
Breslow	0.01-0.75	54%	ref.				ref.			
	0.76-1.00	18%	2.62	1.26	5.46		2.41	1.30	4.47	
	1.01-2.00	10%	5.73	3.40	9.66		4.70	2.83	7.81	
	2.01-3.00	6%	12.16	6.68	22.16		7.28	3.70	14.32	
	3.01-4.00	13%	15.44	9.15	26.08		7.71	4.36	13.63	
	4.00+		25.43	14.80	43.70	<0.0001	13.35	7.54	23.63	<0.0001
Lymph nodes	neg.	86%	ref.				ref.			
	pos.	15%	3.69	2.70	5.04	<0.0001	3.75	1.93	7.29	<0.0001
Metastasis	neg.	97%	ref.				ref.			
	pos.	3%	9.45	7.38	12.11	<0.0001	5.30	2.99	9.39	<0.0001
Morphologies	SSM	77%	ref.				ref.			
	nodular	13%	4.14	3.38	5.06		1.12	0.84	1.51	
	lentigo	4%	1.37	0.60	3.09		0.68	0.22	2.08	
	other spec	6%	4.39	3.08	6.25	<0.0001	1.83	1.12	2.99	0.0012
Calendar period	1984-89	11%	ref.				ref.			
	1990-94	26%	0.74	0.59	0.92		0.92	0.74	1.16	
	1995-99	47%	0.51	0.41	0.64		0.79	0.50	1.26	
	2000-04	73%	0.45	0.36	0.56		0.32	0.14	0.74	
	2005+	100%	0.31	0.23	0.40	<0.0001	0.23	0.11	0.50	<0.0001

Tuscany cancer registry: cause specific survival for skin melanoma. Cox proportional hazard model crude and adjusted hazard ratios.

Eur J Cancer Prev. 2016 Sep;25(5):404-9. Melanoma survival: sex does matter, but we do not know how. Crocetti et al.

Survival is a lenght (of time)



Skin biopsy rates and incidence of melanoma: population based ecological study

H Gilbert Welch, Steven Woloshin, Lisa M Schwartz

BMJ, doi:10.1136/bmj.38516.649537.E0 (published 4 August 2005)

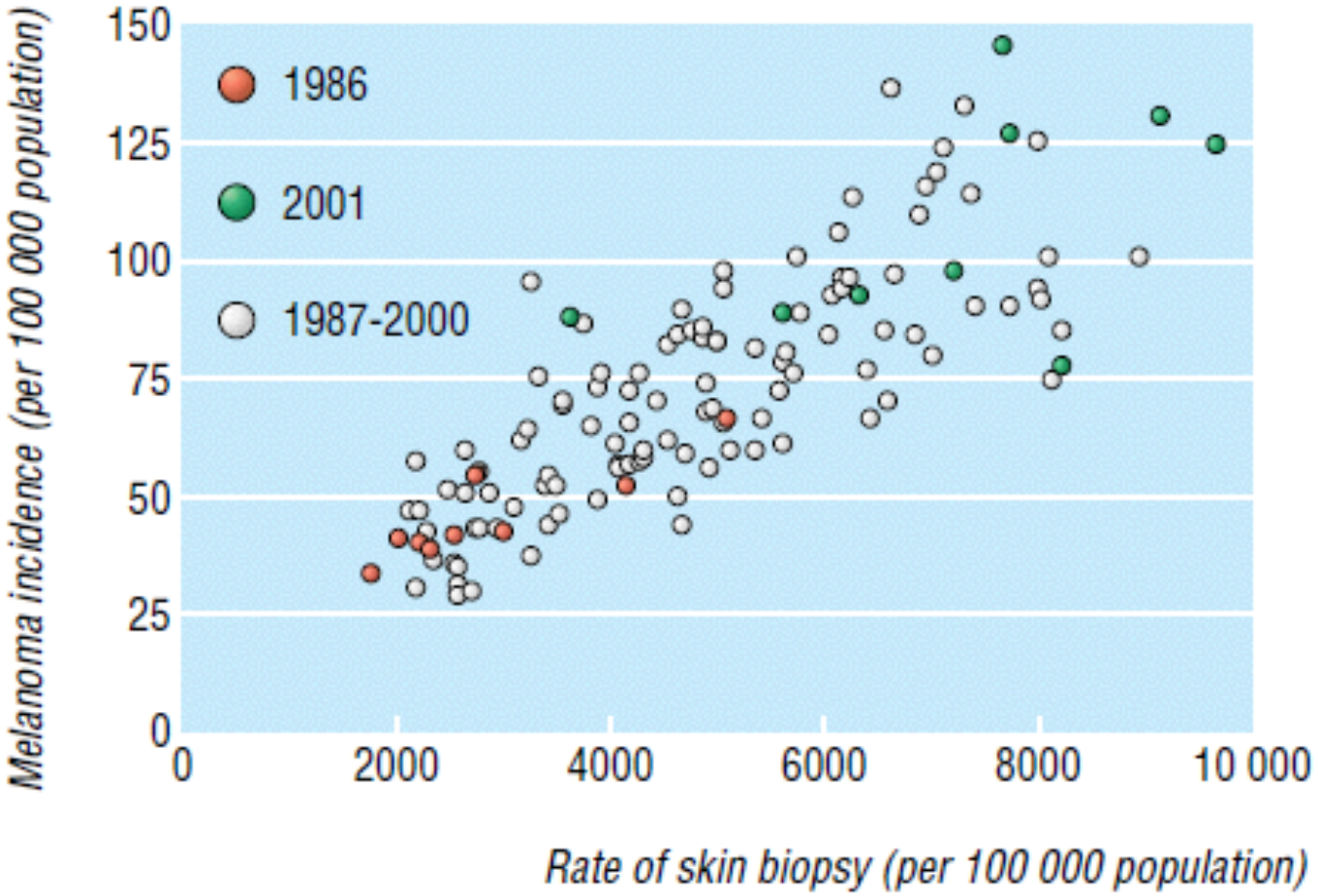
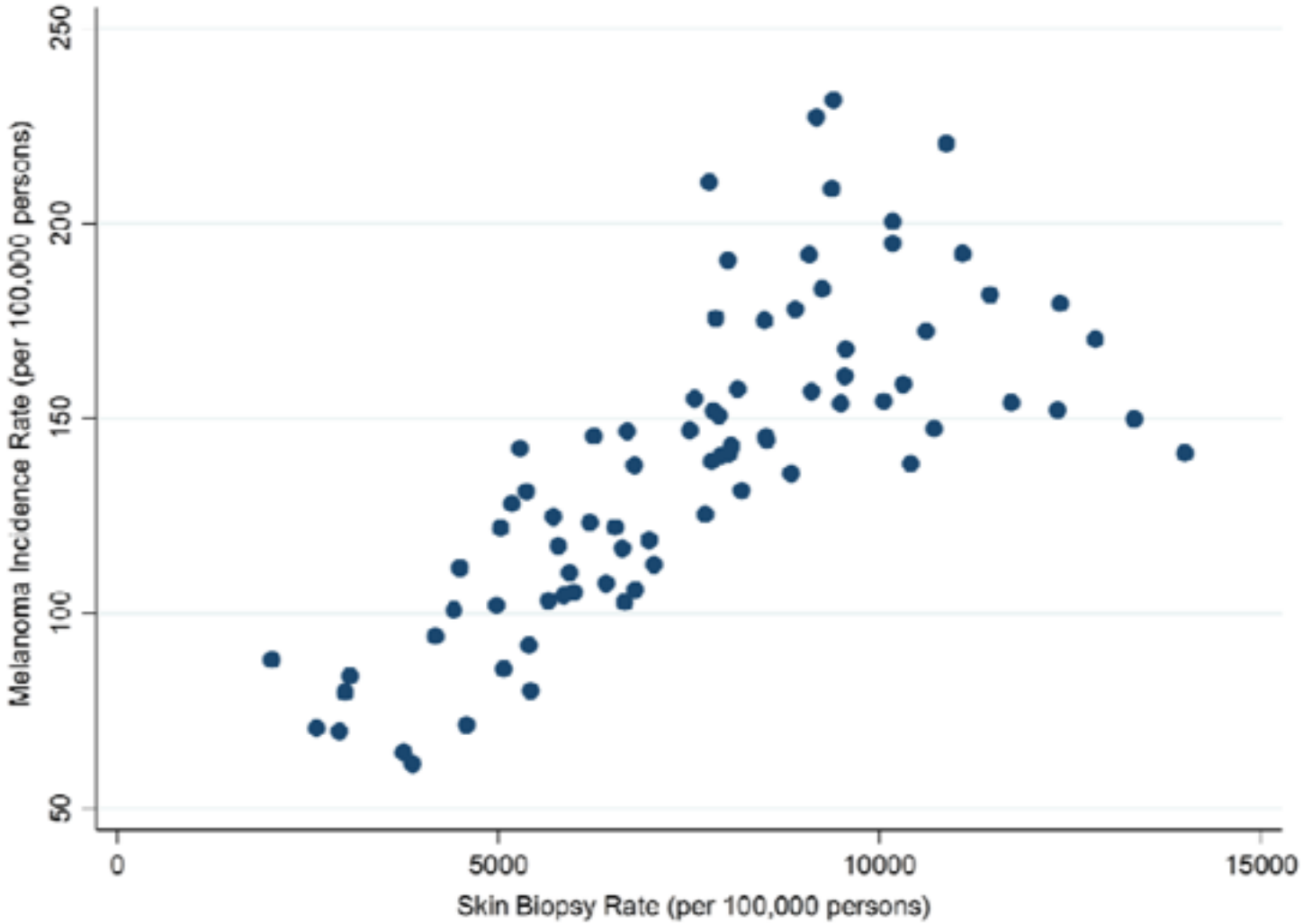


Fig 2 Scatterplot of annual rate of skin biopsy and incidence of melanoma for residents age 65 and older in each of nine US areas participating in Surveillance Epidemiology and End Results programme, 1986-2001

Skin Biopsy Utilization and Melanoma Incidence among Medicare Beneficiaries

M.A. Weinstock[1], J.P. Lott[2], Q. Wang[3], L.J. Titus[4,5], T. Onega[4,5,6], H.D. Nelson[7], L. Pearson[3], M. Piepkorn[8], J.G. Elmore[9], A.N.A. Tosteson[3,4,10]



BJD British Journal of Dermatology

Progress against cancer in the Netherlands since the late 1980s: An epidemiological evaluation

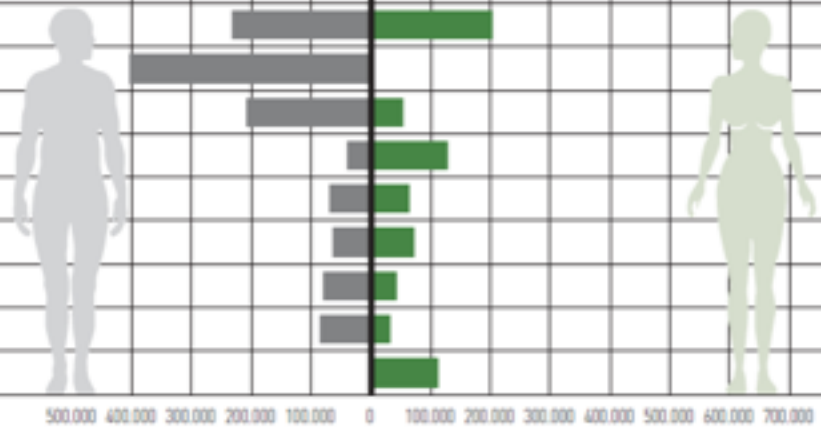
Henrike E. Karim-Kos[1], Lambertus A.L.M. Kiemeney[2,3], Marieke W.J. Louwman[4], Jan Willem W. Coebergh[1,4] and Esther de Vries[1,4]

Int. J. Cancer: **130**, 2981–2989 (2012)

Table 1. Categories of trends in incidence, survival and mortality and the progress classification

Category	Trends in Incidence	Survival	Mortality	Progress classification
A-1	↓	↑	↓	Pr-Opt
	↓	↑	=	Pr-Inc/Pr-Surv
	↓	↑	↑	Pr-Inc/Pr-Surv
A-2	↓	=	↓	Pr-Opt
	↓	=	=	Pr-Inc
	↓	=	↑	Pr-Inc
A-3	↓	↓	↓	Pr-Opt/Non-Imp
	↓	↓	=	Pr-Inc/Non-Imp
	↓	↓	↑	Pr-Inc/Det
B-1	=	↑	↓	Pr-Opt
	=	↑	=	Pr-Surv
	=	↑	↑	Pr-Surv
B-2	=	=	↓	Oth
	=	=	=	Oth
	=	=	↑	Oth
B-3	=	↓	↓	Non-Imp
	=	↓	=	Non-Imp
	=	↓	↑	Det
C-1	↑	↑	↓	Pr-Opt /Non-Imp
	↑	↑	=	Pr-Surv/Non-Imp
	↑	↑	↑	Pr-Surv/Det
C-2	↑	=	↓	Non-Imp
	↑	=	=	Non-Imp
	↑	=	↑	Det
C-3	↑	↓	↓	Non-Imp
	↑	↓	=	Non-Imp
	↑	↓	↑	Det

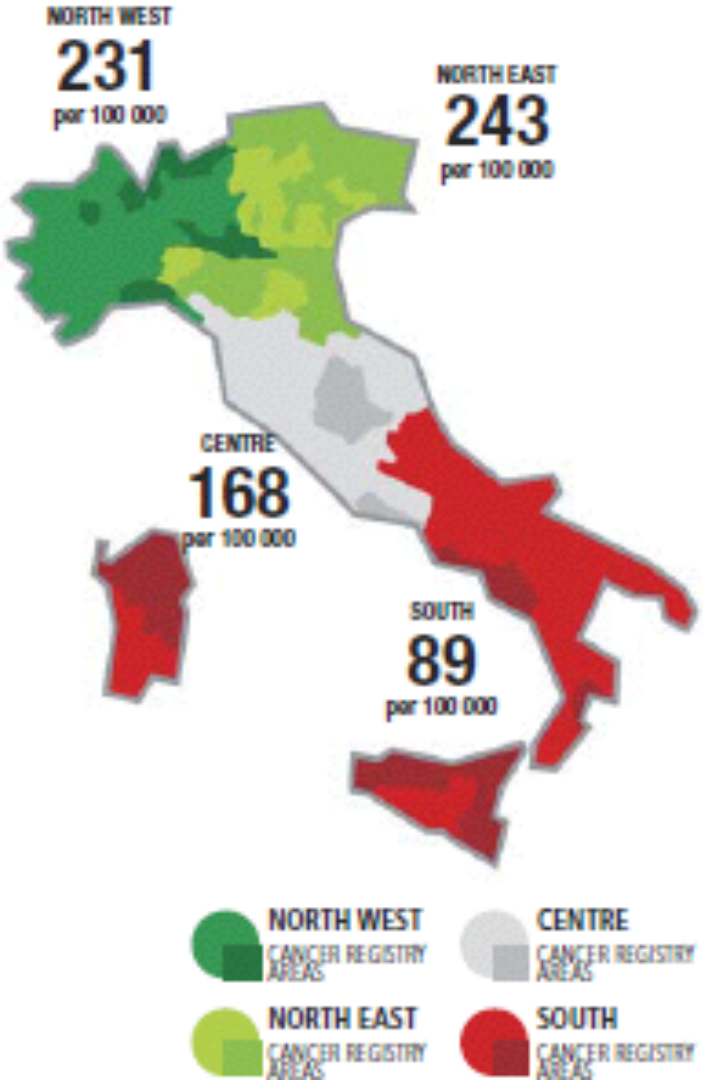
Abbreviations: Pr-Inc: progress by decreasing incidence; Pr-Surv: progress by improved survival; Pr-Opt: optimal progress by decreasing incidence and/or improved survival accompanied by decreasing mortality; Det: deterioration by increasing incidence and/or worsening survival accompanied by increasing mortality; Non-Imp: non improvers because of an increasing incidence and/or worsening survival; Oth: other situations.



	Maschi	Femmine	Totale
Mammella		692.955	692.955
Colon, retto e ano	225.945	201.617	427.562
Prostata	398.708		398.708
Vescica	204.158	49.695	253.853
Tiroide	35.457	124.850	160.307
Linfoma non-Hodgkin	66.864	63.699	130.563
Melanoma cutaneo	58.636	70.751	129.387
Rene	75.972	42.792	118.764
Testa e collo	84.737	28.428	113.165
Corpo dell'utero		109.981	109.981

FIGURA 5. Numero di persone vive dopo una diagnosi di tumore, per sede e sesso. Italia, 2015.

ICD-10 C43 SKIN MELANOMA



Pool of Italian Cancer Registries - 1 January 2010

MELANOMA DELLA PELLE

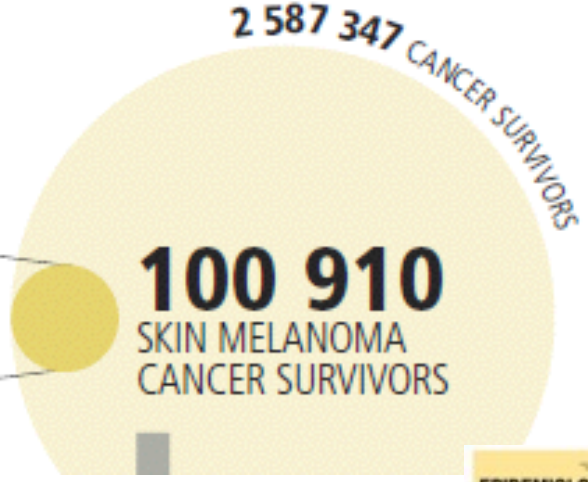
SKIN MELANOMA

(ICD-10 C43)

COMPLETE PREVALENCE BY YEARS SINCE DIAGNOSIS

YEARS →	≤ 2	(2 - 5]	(5 - 10]	(10 - 15]	(15 - 20]	> 20
No. →	17 034	19 974	25 133	16 120	9 440	13 209
% →	17%	20%	25%	16%	9%	13%
PROPORTION PER 100 000 →	31	37	45	30	18	24

MALE 43% FEMALE 57%



63%

38%

AGE AT DIAGNOSIS	TIME TO CURE YEARS	
	MALE	FEMALE
0 - 44	6	4
45 - 59	8	7
60 - 74	10	10
75+	10	12

TIME TO CURE

Time span after cancer diagnosis necessary to eliminate excess mortality due to cancer. It is measured as the time necessary to reach a 5-year conditional relative survival (that is the probability to survive additional five years) >95%.

AGE AT DIAGNOSIS	CURE FRACTION %	
	MALE	FEMALE
0 - 44	77%	85%
45 - 59	67%	78%
60 - 74	54%	66%
75+	47%	59%

CURE FRACTION

Proportion of cancer patients who are expected to reach the same death rates of the general population and will not die as a result of their cancer.

Il melanoma cutaneo in Italia

- Incidenza in crescita e mortalità stabile
  - E' aumentata nei decenni scorsi l'esposizione ai fattori di rischio? A quali?
  - La pressione diagnostica è efficace nel contenere l'aumento dei decessi o produce soprattutto sovradiagnosi?
- Il ruolo dei Registri
- Prevenzione primaria e secondaria
- Come identificare i melanomi aggressivi?
- Un carico crescente da trattare e soprattutto da seguire. I malati lo sono per sempre?