Supplementary Online Content

Tokez S, Hollestein L, Louwman M, Nijsten T, Wakkee M. Incidence of multiple vs first cutaneous squamous cell carcinoma on a nationwide scale and estimation of future incidences of cutaneous squamous cell carcinoma. *JAMA Dermatol.* Published online October 28, 2020. doi:10.1001/jamadermatol.2020.3677

eTable 1. Numbers and European Standardized Rates of First cSCC Stratified by Body Site and Stage in Males and Females

eTable 2. Incidence Rates (per 100,000 Person-Years) of cSCC in the Netherlands in Males and Females From 1989 to 2017, Age-Standardized to the European Standard Population 2013 (European Standardized Rate [ESR 2013]), US Standard Population 2000 (United States Standardized Rate [USSR]), European Standard Population 1976 (European Standardized Rate [ESR 1976]), World Standard Population 1968 (World Standardized Rate [WSR]) and World (WHO 2000-2025) Standard Population (World Standardized Rate [WSR 2000-2025])

eFigure 1. Three Year Moving ESR Averages for cSCC per Body Site in Males (A) and Females (B)

eFigure 2. Body Site Specific Distribution of First cSCCs (A) and Subsequent cSCCs (B)

This supplementary material has been provided by the authors to give readers additional information about their work.

| | Males | | | | | | | | Females | | | | | | | | | |
|----------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|------|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|------|------|
| | | | | ESR | | | | | | | | | ESR | | | | | |
| | N | 1989- 1993 | 1994- 1998 | 1999- 2003 | 2004- 2008 | 2009- 2013 | 2014- 2015 | 2016 | 2017 | N | 1989- 1993 | 1994- 1998 | 1999- 2003 | 2004- 2008 | 2009- 2013 | 2014- 2015 | 2016 | 2017 |
| Overall | 84,572 | 40.1 | 43.7 | 45.8 | 58.0 | 75.1 | 79.6 | 97.1 | 107.6 | 61,046 | 14.5 | 17.3 | 19.9 | 27.6 | 39.7 | 44.1 | 59.7 | 68.7 |
| Body site | | | | | | | | | | | | | | | | | | |
| Lips | 2580 | 2.1 | 1.8 | 1.4 | 1.5 | 1.6 | 1.6 | 2.1 | 1.6 | 1728 | 0.5 | 0.6 | 0.6 | 0.7 | 1.1 | 1.2 | 1.8 | 1.5 |
| Eyelid | 898 | 0.7 | 0.6 | 0.7 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 857 | 0.3 | 0.2 | 0.4 | 0.4 | 0.5 | 0.5 | 0.7 | 0.6 |
| Ear | 14,941 | 9.9 | 10.3 | 9.9 | 11.2 | 13.6 | 13.1 | 14.1 | 10.9 | 1077 | 0.4 | 0.4 | 0.4 | 0.5 | 0.6 | 0.7 | 1.0 | 0.7 |
| Face | 30,473 | 14.1 | 15.9 | 17.2 | 21.2 | 27.5 | 28.5 | 34.2 | 33.0 | 27,357 | 7.6 | 8.9 | 9.8 | 13.0 | 17.7 | 19.0 | 23.6 | 21.7 |
| Scalp/ neck | 14,889 | 5.2 | 6.4 | 7.5 | 11.1 | 15.1 | 18.2 | 18.9 | 25.4 | 3269 | 0.7 | 0.8 | 0.9 | 1.3 | 1.9 | 2.4 | 3.6 | 5.9 |
| Trunk | 4814 | 1.1 | 1.5 | 1.9 | 2.8 | 4.1 | 4.4 | 6.5 | 6.7 | 5636 | 0.8 | 1.2 | 1.4 | 2.4 | 4.0 | 4.7 | 7.0 | 7.7 |
| Arms | 10,982 | 5.6 | 5.8 | 5.4 | 7.0 | 9.0 | 9.4 | 13.0 | 13.9 | 10,998 | 2.6 | 3.0 | 3.5 | 5.0 | 7.3 | 7.8 | 10.7 | 13.0 |
| Legs | 3458 | 1.0 | 1.1 | 1.4 | 1.9 | 3.1 | 3.4 | 4.9 | 5.7 | 8938 | 1.3 | 2.0 | 2.7 | 4.0 | 6.3 | 7.5 | 9.7 | 10.6 |
| Unknown | 1537 | 0.4 | 0.3 | 0.5 | 0.8 | 0.5 | 0.6 | 2.7 | 9.9 | 1186 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 1.7 | 6.9 |
| Stage | | | | | | | | | | | | | | | | | | |
| I | 56,450 | 26.3 | 28.8 | 32.1 | 45.4 | 62.7 | 68.0 | 14.8 | 2.1 | 40,821 | 9.4 | 11.7 | 14.5 | 22.7 | 34.3 | 39.1 | 8.8 | 1.4 |
| II | 5892 | 3.8 | 3.9 | 4.4 | 5.7 | 6.4 | 6.8 | 1.6 | 0.4 | 3446 | 1.3 | 1.2 | 1.6 | 2.0 | 2.3 | 2.6 | 0.7 | 0.1 |
| 111 | 986 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 | 1.2 | 0.6 | 0.1 | 490 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.5 | 0.2 | 0.1 |
| IV | 158 | 0.0 | 0.1 | 0.1 | 0.0 | 0.2 | 0.5 | 0.1 | 0.1 | 104 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 |
| Unknown | 21,086 | 9.3 | 10.1 | 8.6 | 6.2 | 5.1 | 3.1 | 80.0 | 104.9 | 16,185 | 3.5 | 4.0 | 3.5 | 2.7 | 2.8 | 1.8 | 50.0 | 67.2 |

eTable 1. Numbers and European Standardized Rates of First cSCC Stratified by Body Site and Stage in Males and Females

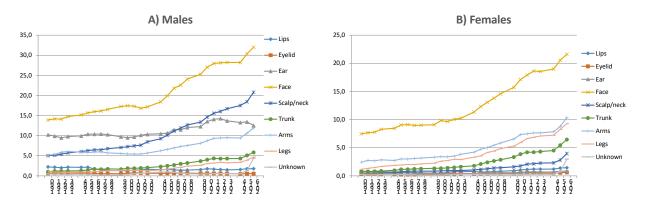
Abbreviations: cSCC, cutaneous squamous cell carcinoma; ESR, European Standardized Rate per 100,000 person-years; N, number of cases.

eTable 2. Incidence Rates (per 100,000 Person-Years) of cSCC in the Netherlands in Males and Females From 1989 to 2017, Age-Standardized to the European Standard Population 2013 (European Standardized Rate [ESR 2013]), US Standard Population 2000 (United States Standardized Rate [USSR]), European Standard Population 1976 (European Standardized Rate [ESR 1976]), World Standard Population 1968 (World Standardized Rate [WSR]) and World (WHO 2000-2025) Standard Population (World Standardized Rate [WSR 2000-2025])

| Year of | Gender | ESR 2013 | USSR | ESR 1976 | WSR 1968 | WSR 2000- |
|-----------|--------|----------|------|----------|----------|-----------|
| diagnosis | | 40.0 | 00.5 | | | 2025 |
| 1989 | Male | 40.0 | 26.5 | 22.3 | 14.1 | 16.9 |
| 1990 | Male | 40.4 | 26.5 | 22.2 | 13.9 | 16.7 |
| 1991 | Male | 38.6 | 25.6 | 21.4 | 13.4 | 16.1 |
| 1992 | Male | 40.6 | 27.1 | 22.8 | 14.3 | 17.2 |
| 1993 | Male | 40.9 | 27.0 | 22.4 | 13.8 | 16.8 |
| 1994 | Male | 43.1 | 28.8 | 24.2 | 15.1 | 18.1 |
| 1995 | Male | 43.3 | 28.5 | 23.7 | 14.8 | 17.9 |
| 1996 | Male | 44.6 | 30.0 | 25.0 | 15.5 | 18.8 |
| 1997 | Male | 44.4 | 29.4 | 24.6 | 15.3 | 18.4 |
| 1998 | Male | 43.1 | 28.5 | 23.6 | 14.7 | 17.8 |
| 1999 | Male | 45.5 | 30.2 | 25.0 | 15.5 | 18.8 |
| 2000 | Male | 45.4 | 30.3 | 24.5 | 15.0 | 18.5 |
| 2001 | Male | 45.1 | 30.1 | 24.8 | 15.2 | 18.6 |
| 2002 | Male | 46.6 | 30.7 | 25.0 | 15.4 | 18.8 |
| 2003 | Male | 46.6 | 30.4 | 24.9 | 15.3 | 18.7 |
| 2004 | Male | 50.7 | 33.8 | 27.7 | 17.1 | 20.9 |
| 2005 | Male | 56.4 | 37.3 | 30.2 | 18.4 | 22.6 |
| 2006 | Male | 56.8 | 37.8 | 30.7 | 18.9 | 23.1 |
| 2007 | Male | 63.9 | 42.1 | 34.1 | 20.8 | 25.6 |
| 2008 | Male | 62.4 | 41.2 | 33.2 | 20.3 | 25.1 |
| 2009 | Male | 67.2 | 44.4 | 35.4 | 21.4 | 26.7 |
| 2010 | Male | 74.0 | 48.3 | 38.9 | 23.8 | 29.3 |
| 2011 | Male | 80.4 | 52.9 | 42.6 | 26.0 | 32.1 |
| 2012 | Male | 77.4 | 51.4 | 41.2 | 25.0 | 30.9 |
| 2013 | Male | 76.7 | 51.0 | 40.5 | 24.4 | 30.5 |
| 2014 | Male | 80.5 | 53.2 | 42.1 | 25.3 | 31.6 |
| 2015 | Male | 78.8 | 52.0 | 41.1 | 24.6 | 30.9 |
| 2016 | Male | 97.1 | 64.2 | 51.1 | 30.9 | 38.5 |
| 2017 | Male | 107.6 | 71.4 | 57.2 | 24.6 | 43.0 |
| 1989 | Female | 13.9 | 9.3 | 7.8 | 5.0 | 5.9 |
| 1990 | Female | 13.9 | 9.3 | 7.6 | 4.8 | 5.8 |
| 1991 | Female | 14.3 | 9.6 | 8.1 | 5.1 | 6.1 |
| 1992 | Female | 15.5 | 10.4 | 8.7 | 5.5 | 6.6 |
| 1993 | Female | 14.8 | 10.0 | 8.3 | 5.3 | 6.3 |
| 1994 | Female | 17.0 | 11.5 | 9.6 | 6.1 | 7.3 |
| 1995 | Female | 16.7 | 11.3 | 9.7 | 6.2 | 7.4 |
| 1996 | Female | 18.4 | 12.4 | 10.3 | 6.5 | 7.8 |
| 1997 | Female | 17.3 | 11.7 | 9.9 | 6.3 | 7.5 |
| 1998 | Female | 16.9 | 11.5 | 9.8 | 6.3 | 7.5 |
| 1999 | Female | 18.8 | 12.8 | 10.7 | 6.8 | 8.1 |
| 2000 | Female | 18.8 | 12.8 | 10.8 | 6.8 | 8.2 |
| 2000 | Female | 20.5 | 13.8 | 11.7 | 7.4 | 8.8 |

© 2020 American Medical Association. All rights reserved.

| 2002 | Female | 19.4 | 13.1 | 11.0 | 7.0 | 8.3 |
|------|--------|------|------|------|------|------|
| 2003 | Female | 21.9 | 14.8 | 12.5 | 7.9 | 9.5 |
| 2004 | Female | 23.1 | 15.6 | 13.2 | 8.3 | 10.0 |
| 2005 | Female | 25.7 | 17.3 | 14.6 | 9.2 | 11.0 |
| 2006 | Female | 28.4 | 19.2 | 16.3 | 10.4 | 12.4 |
| 2007 | Female | 29.1 | 19.6 | 16.7 | 10.6 | 12.6 |
| 2008 | Female | 31.8 | 21.4 | 18.2 | 11.6 | 13.7 |
| 2009 | Female | 33.7 | 22.7 | 19.4 | 12.4 | 14.7 |
| 2010 | Female | 38.2 | 25.7 | 22.0 | 14.0 | 16.6 |
| 2011 | Female | 43.0 | 29.1 | 24.8 | 15.8 | 18.8 |
| 2012 | Female | 41.3 | 27.7 | 23.6 | 15.0 | 17.8 |
| 2013 | Female | 42.1 | 28.2 | 23.7 | 15.0 | 17.9 |
| 2014 | Female | 43.9 | 29.5 | 24.9 | 15.7 | 18.8 |
| 2015 | Female | 44.3 | 29.7 | 24.9 | 15.6 | 18.8 |
| 2016 | Female | 59.7 | 40.3 | 33.9 | 21.3 | 25.7 |
| 2017 | Female | 68.7 | 46.4 | 39.5 | 25.0 | 29.9 |



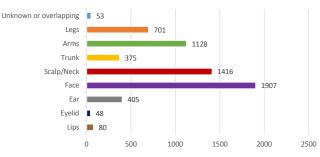
eFigure 1. Three Year Moving ESR Averages for cSCC per Body Site in Males (A) and Females (B)

eFigure 2. Body Site Specific Distribution of First cSCCs (A) and Subsequent cSCCs (B)

A) Distribution of first cSCC per body site Unknown or overlapping 28 Legs 1240 Arms 1957 Trunk 1105 Scalp/Neck 2014 Face 3809 Ear 685 Eyelid 91 Lips 233 0 500 1000 1500 2000 2500 3000 3500 4000

Lips
Eyelid
Ear
Face
Scalp/Neck
Trunk
Arms
Legs
Unknown or overlapping

B) Distribution of subsequent cSCCs per body site



Lips
Eyelid
Ear
Face
Scalp/Neck
Trunk
Arms
Legs
Unknown or overlapping

© 2020 American Medical Association. All rights reserved.