

Mapping Melanoma with Google – A Record Breaking Summer and Insights into Public Awareness Using Google Trends

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Abstract Introduction: UK melanoma incidence is continuing to rise, resulting in a growing economic burden to the NHS and wider economy. Public awareness campaigns have aimed to tackle this issue, yet the real-world impact on the UK population is poorly understood. Google Trends is a tool that identifies search interest patterns by keywords, incidence and geography. The study aim is to characterise UK and international search trends for skin cancer, tanning methods and sun protection. **Methods:** Google Trends was systematically searched using terms associated with artificial UV tanning, sun protection and skin lesions, including cancer. The searches compared the UK to Australia and the USA (2004-2018). **Results:** Search terms of artificial UV tanning (“sunbed”, “tanning bed” and “tanning salon”) peak annually during May, whereas the highest volume of searches for sun prophylaxis (“sun cream”, “sunscreen”, “sun protection”) and skin lesions (“mole”, “skin cancer”) occurs during June. Troughs appear from November to January. Australia and the USA’s sun protection searches occur before summer peaks. **Conclusions:** Skin cancer-related searches occur on a predictable cycle, peaking during summer and declining over winter. The UK interest in tanning peaks during late spring/early summer, not traditionally targeted for campaigning, whilst skin cancer searches peak mid-to-late summer. This is likely post-sun damage. Australians search for skin cancer advice in their spring, supporting their well-studied culture of skin cancer awareness. These lessons can inform UK health policy. Google Trends is useful for characterising search interest, which may reflect public awareness.

Keywords: Google trends, melanoma, United Kingdom, UK, Skin cancer, UV

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1. Introduction

Malignant melanoma is a growing problem in the United Kingdom (UK), with an almost 50% increase in incidence since 2006 [1]. It is forecast that the rate of melanoma may be twice its current state in only 30 years [2]. This is reflected in the mortality of melanoma, which has more than doubled since the 1970’s [3]. Age-standardised mortality is still rising, despite improvements in diagnosis, staging and management, with a 20% increase in males and 8% increase in females in the past ten years [3]. As a result, this costs the NHS in England over £100 million each year, 43% of which are due to outpatient attendances. As incidence continues to rise, financial projections suggest this will reach almost £200 million by 2020 [4]. However, this is six times less than the significant non-NHS costs that melanoma incurs, such as those sustained by the patient, working days lost to skin cancer and working life years lost due to mortality.

As the majority of melanoma is expected to be attributed to preventable causes, the need for high-quality public awareness and education is paramount. The UK has implemented a number of skin cancer campaigns; from the mid-1990’s Sun Know How campaign, to the more recent NHS 2017 #CoverUpMate initiative. Despite these efforts, many have not been sustained due to lack of funding. The British Association of Dermatologists (BAD) has their own, non-government funded Sun Awareness campaign that runs annually from April to September. BAD have also launched a World Ultraviolet (UV) app that provides free UV ratings across the globe. It appears that a variety of internet-based methods and public awareness campaigns could be important for delivering a clear and prolonged message. Nevertheless, it is difficult to accurately assess the effectiveness of these initiatives and whether the UK public are well-informed and engaging in skin cancer-related protective behaviours. The aim of this work is to characterise UK and international search trends in skin cancer, using Google Trends; a public, web-based search tool.

2. Methods

This is a descriptive study to characterise UK search interest of skin cancer and its related terms. Google Trends was used to assess search trends. This is a free, open-access website and therefore the use of these data required no special permissions. The data is provided as Relative Search Volume (RSV), which is defined as how often a search term is used in comparison with the total volume of searches of that term in a given time or area. It therefore represents the likelihood of a term being searched in a given time/setting. As the searches are performed at a set point in time, the results are relative to the volume of searches conducted at that time. The values are normalised on a scale of 0 to 100. Popular searches are scaled, and so terms with a very low volume of searches will appear as zero. Google trend excludes data from the same internet users repeating the same search, as well as searches that include special characters.

Comprehensive, systematic keyword searches were conducted on Google Trends (<https://trends.google.com/trends/>) during November 2018. The searches were limited to the United Kingdom and from 2004-present, as Google Trend data is unavailable before this period. Region of interest was changed to investigate the United States of America (USA) and Australia, as necessary. The search was also set to “All categories” and “Web search”. This was done as the overwhelming majority of Google searches are web-based, without a defined sub-category, therefore maximising the relevancy of the trend data. As the general UK population will have varying levels of education, searches were based on both common layman terms for skin cancer, as well as the medical terms used to describe the condition (Table 1). Any further relevant words from the ‘Related topics’ or ‘Related queries’ sections as suggested by Google Trends, were also included. Multiple terms can be congregated for comparison using the “+ add comparison” button, up to a maximum of 30. If the possible searches exceeded this number, those with the lowest RSV would be excluded.

Searches of Google Trends were performed using individual terms as well as combined searches. Three broad categories of combined searches were conducted; terms related to artificial UV tanning, terms related to sun protection and finally, terms related to skin lesions/cancer.

Both plurals and terms with and without a space were searched as these are defined as unique searches by Google trends, and thus, produce different results. The use of capitalisation does not affect the results. Variations of each term (synonyms, with and without spaces, plurals) were initially searched in the Google Trends database. The variations of each term which produced the most search results were used to represent that topic.

Results were viewed according to the yearly graph (2004-present) for the entire UK, as well as subdivisions of the UK (Wales, England, Scotland, Northern Ireland). The inter-city interest across England was also explored

using the sub-region tool. Results were also investigated for Australia and the USA. Raw tabulated data is provided in the Supplementary file.

3. Data Analysis

Google Trend provides only relative quantitative data, limiting the variety of analysis that could be performed. As a result, a descriptive analysis was undertaken to define and characterise the trends in search interest. Percentage change in trends was used to describe variations in interest over time.

4. Results

4.1. Google Trends Search Results for Artificial Tanning Terms

The term “sunbed” was searched individually. This demonstrated that during the summer months, interest in this search term has almost quadrupled since 2004. The periods of lower search volume during the winter have more than tripled in this time frame (Table 1, supplementary file).

The terms; “sunbed”, “tanning bed” and “tanning salon” were then searched collectively as they produced the most activity when exploring terms to describe artificial UV tanning. All three terms have increased in popularity from May 2004 to May 2018, with the term “sunbed” increasing from an RSV of 27 to 100 during this period (Table 2, supplementary file and Figure 1, panel A). Increases of 5 and 3 were seen with “tanning bed” and “tanning salon”, respectively. Search volume of these terms falls to 29-51% of the peak interest during the troughs in the winter months.

The search interest in ‘sunbed’ with the addition of “-near me”, have increased by 85% between the summer of 2016 and the summer of 2018, with an eight times increase in search volume since the near me feature was first introduced (Figure 1, panel B).

4.2. Google Trends Search Results for Sun Protection Products

The term “sun cream” was used to search Google Trends individually. This term was chosen as there were negligible differences between the other most popular terms in this category; “sunscreen” and “SPF”. There have been incremental increases in the RSV of sun cream each year, from 12 in June 2004, to 92 in June 2018 (Table 3, supplementary file).

The terms; “sun cream”, “sun protection”, “sunscreen”, “after sun” and “SPF” provided a relevant picture of the search for terms related to sun safety, and were therefore searched collectively. The term “sun cream” has been rising steadily (RSV 41 to 87, from June 2013 to June 2018) (Table 4, supplementary file and Figure 2). Similar increases are seen with “sunscreen” and “SPF” during the same time period (RSV 44 to 92, 36 to 73 respectively).

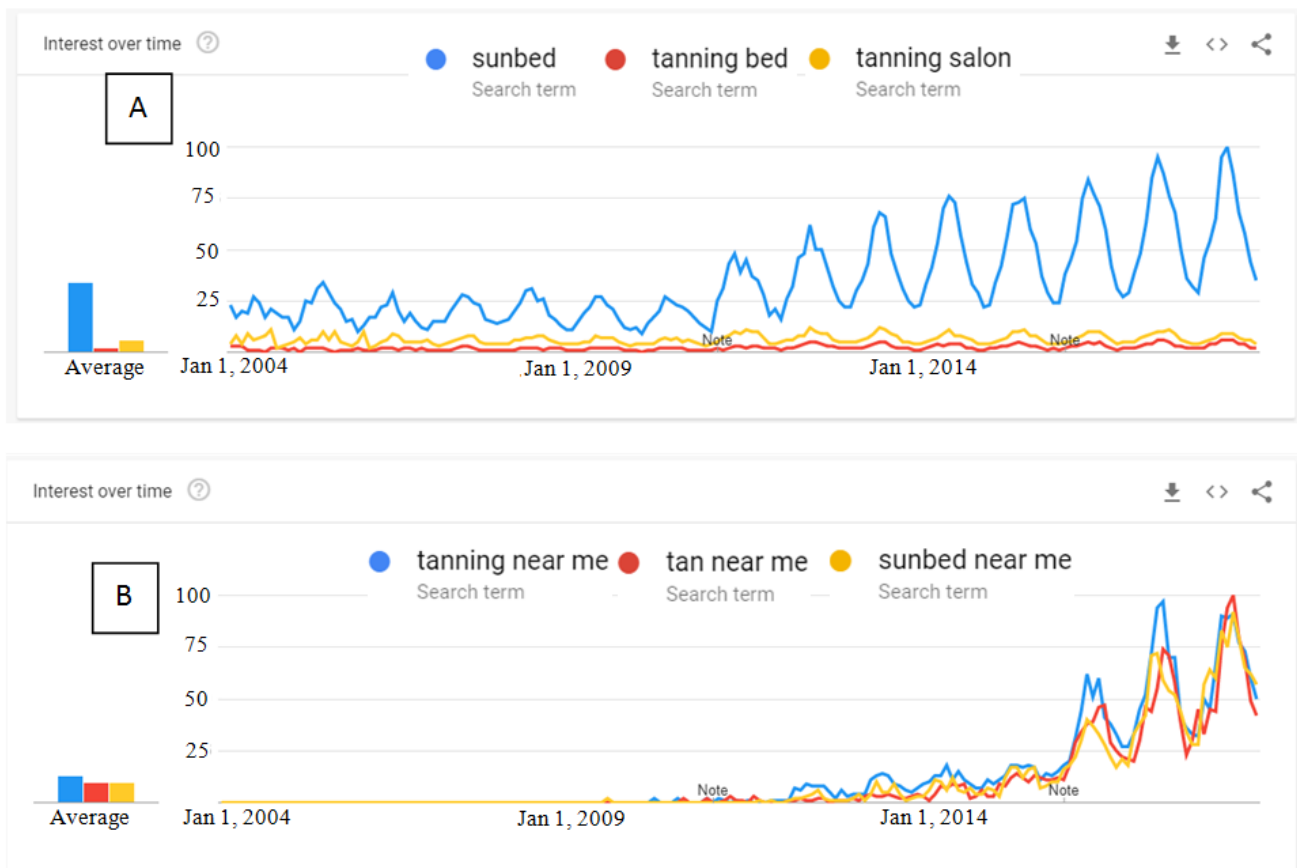


Figure 1. Google Trends results for search terms related to tanning. Panel A, terms; “sunbed” (blue), “tanning bed” (red) and “tanning salon” (yellow). Panel B, terms; “tanning near me” (blue), “tan near me” (red), “sunbed near me” (yellow)

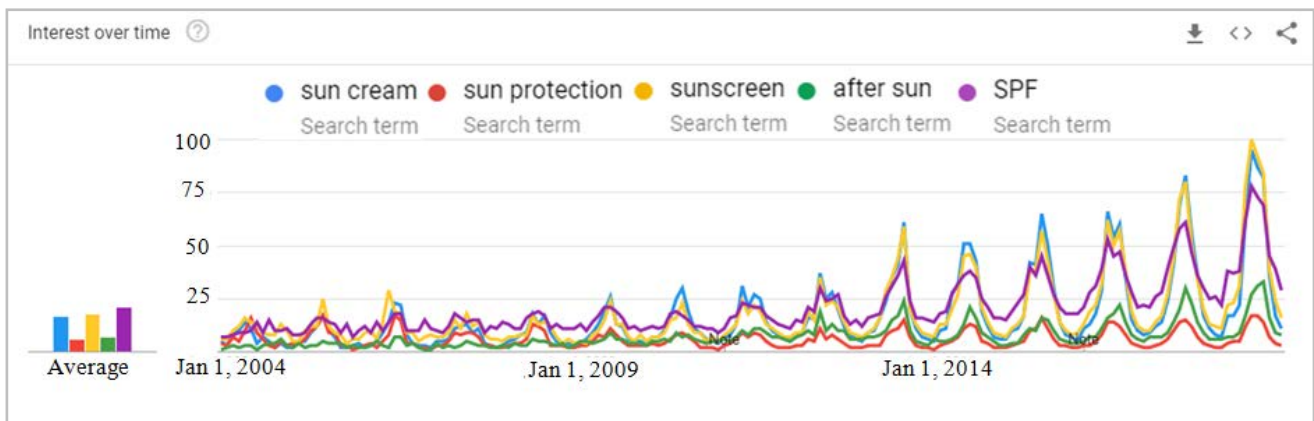


Figure 2. Google Trends results for the terms; “sun cream” (blue), “sun protection” (red), “sunscreen” (yellow), “after sun” (green) and “SPF” (purple)

4.3. Google Trends Search Results for Skin Lesion Terms

Both “mole” and “skin cancer” were searched individually as they were assumed to represent different types of searches. Firstly, “mole” has increased linearly, by 123% between 2004 and 2018 (Table 5, supplementary file). On the other hand, “skin cancer” is cyclical, but remains at a constant gross search volume with peaks and troughs of 82 and 52 in 2017, compared with 84 and 36 in 2004 (Table 6, supplementary file).

The terms; “mole”, “skin cancer”, “melanoma” and “malignant melanoma” were searched together to

represent skin lesion searches of Google Trends. The terms “melanoma” and “malignant melanoma” were included so a comparison can be made between the popularity of layman’s and medical terminology of skin cancer. The term “mole” has increased steadily in popularity, by over 50% since 2004 (Table 7, supplementary file and Figure 3). There has been no significant increase in the volume of searches of “malignant melanoma” over the past 14 years, whilst the singular term “melanoma” has also remained stable (RSV between 11 and 18). Searches for “skin cancer” remain around RSV 20 during the winter, whilst they double during the summer (RSV ~40).

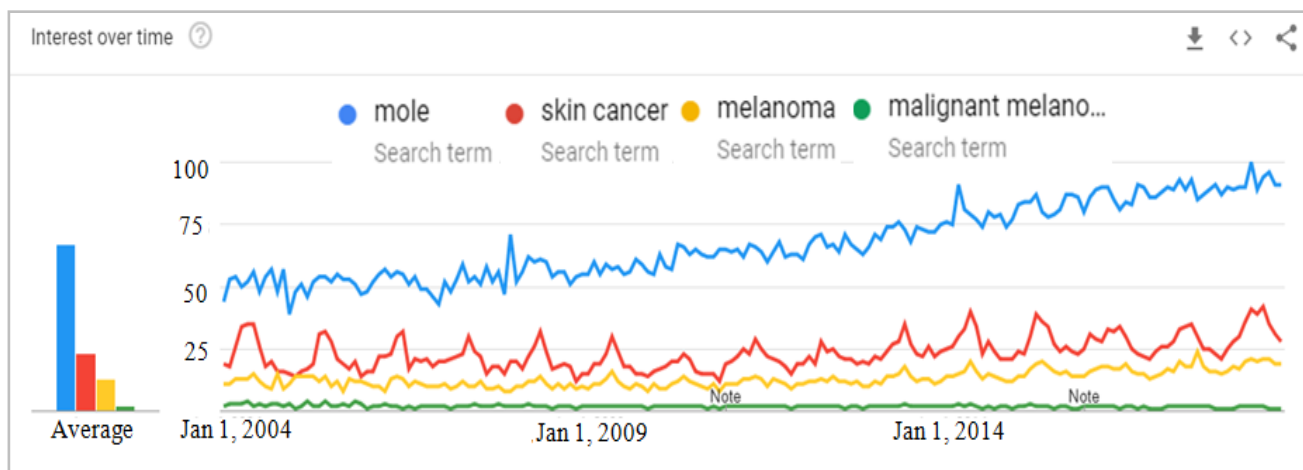


Figure 3. Google Trends results for the terms; “mole” (blue), “skin cancer” (red), “melanoma” (yellow) and “malignant melanoma” (green)

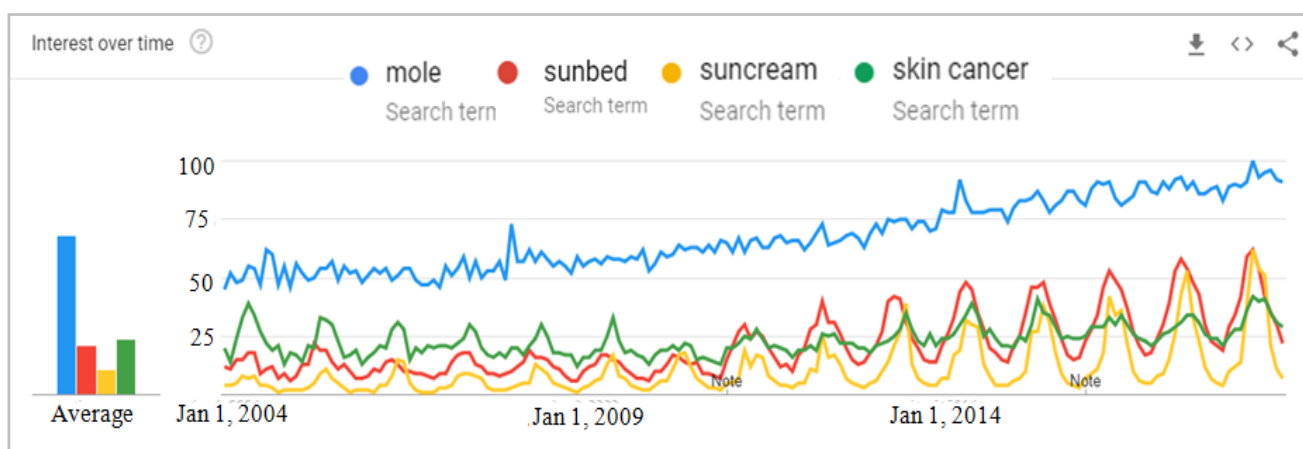


Figure 4. Google Trends results for the terms: “mole” (blue), “sunbed” (red), “sun cream” (yellow) and “skin cancer” (green)

4.4. Search Interest between Artificial Tanning, Sun Protection and Skin Lesions

The most popular search terms that represented artificial tanning, sun protection and skin lesions were “sunbed”, “sun cream” and “mole” respectively. The term “skin cancer” was also included in this search as it was deemed to represent a separate search from “mole”. As discussed previously, search interest in the term “mole” has been steadily rising since 2004, with current interest more than double that of the term “skin cancer”, and 61% more prevalent than both “sunbed” and “sun cream” (May 2018) (Table 8, supplementary file and Figure 4). Although rising at similar rates, the term “sunbed” exceeds searches for “sun cream” by an RSV of 0-16 annually during summer, and an RSV of 4-16 annually during winter.

4.5. Australia and the USA

Australia’s searches for “skin cancer” have declined to 59% in January 2018 when compared to its maximal search volume during January 2004 (Figure 5, panel A). Periods of low search volume each December have remained stable (RSV 24-30) over the past 14 years. On

the contrary, “sunscreen” searches have increased year-on-year with the highest search volume in January 2017 (RSV 100), up from 50, 43 and 42 from 2016-2014, respectively (Figure 5, panel B). There is a biphasic pattern to the peak search interest during Australian summertime, the first occurring in October/November and the second, in December/January.

The USA’s searches for “skin cancer” are also on a minor downward trend since 2004 (RSV 100 to 81, from June 2004 to June 2018) (Figure 5, panel C). The searches also exist on a cyclical basis (peak RSV 74 to 100, trough RSV 43 to 61). The peaks for “sunscreen” searches are narrow (June only) every year (Figure 5, panel D). The interest in this term is also increasing on an annual basis (increases of RSV by 3-17 each year between June 2013 and June 2018). Troughs in interest usually last from November to January, with RSV values that are 12-13% of those seen during peak search volume.

4.6. Differences in Search Interest within the UK

Data for the search interest volume of skin lesions, sun protection and artificial tanning is provided within the Supplementary file.

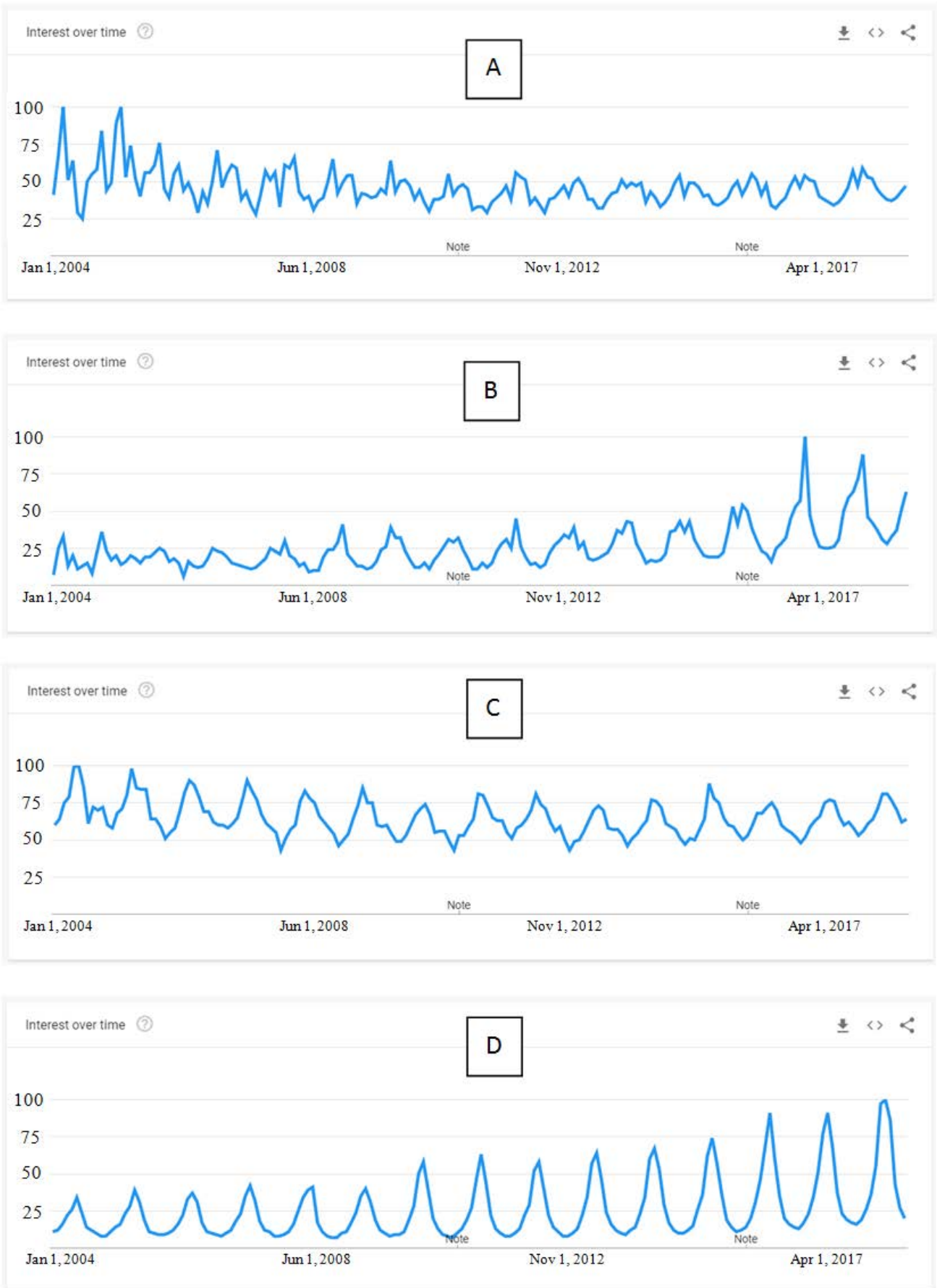


Figure 5. Google Trends results for various search terms across different countries. Panel A="skin cancer" (Australia), Panel B="sunscreen" (Australia), Panel C="skin cancer" (USA) and Panel D="sunscreen" (USA)

5. Discussion

This study has characterised the search interest surrounding skin cancer in the UK, from skin lesions to the risk factors for malignancy, as well as interest in sun protection products.

5.1. Artificial Tanning Interest

Searches for tanning methods reveal an annual biphasic pattern (Figure 1, panel A). The peak of this occurs every May, with the lowest search volume in December. This suggests that people are interested in obtaining a tan before the summer season begins. Additionally, the interest around sunbeds in particular, is increasing year-on-year. This is shown by a 50% increase in RSV between the May 2012 and 2018. This progressive increase could be due to the rapid expansion of social media and the public's desire to obtain a tan quickly and cheaply. As a result, campaigns aimed at reducing these negative behaviours should target the pre-summer period.

Searching for similar terms with the addition of “-near me” shows initial activity in 2012, followed by a dramatic rise in search volume during 2014 (Figure 1, panel B). Activity began when Google introduced their “near me now” feature which using Global Positioning System (GPS) to enhance location services and suggest points of interest in close proximity to the user. It appears that as the service gained popularity and the functionality improved, an increase in uptake followed. From current data, it appears this trend of searching, in light of convenience, is also on a steep upward progression.

5.2. Sun Protection Interest

The most popular terms for sun care include, “sun cream”, “sun protection”, “sunscreen”, “after sun” and “SPF”. The peaks in search interest occur annually around June (Figure 2). There is a tendency for these terms to be searched later than the terms used for obtaining a tan. This implies that the general UK populous are initially interested in acquiring a tan early as summer begins and less worried about the harmful effects of the UV rays used in artificial tanning booths. Once exposure and sun damage occurs, it appears people then search more for sun protection products, including after sun, a product used to soothe the skin following UV exposure. Therefore, public education should focus on encouraging prophylaxis and prevention of sun damage before sun exposure occurs.

5.3. Skin Lesion Interest

The search volume for skin cancer is cyclical, with seasonal spikes around June and troughs in the months surrounding December (Figure 3). This may be explained by the seasonal changes in UK climate with UV radiation highs of 6-7 in June/July and lows of 1-2 in November/December/January. This may be compounded by the fact that people tend to wear less clothing as the temperature increases in the summer months. It may be that more suspicious skin lesions or new moles are discovered, leading to an increase in Google searches.

Searches of ‘mole’ are less cyclical, but demonstrate a noticeable, linear increase in RSV since to 2004, which fits with the rising temperatures and increasing melanoma incidence. When compared to the term ‘skin cancer’, searches for mole are more than twice as popular.

The use of medical terminology when searching Google is far less prevalent than the layman term equivalents. For example, “melanoma” and “malignant melanoma” are only half as popular as the term “skin cancer”. This reflects a lack of awareness of medical terminology amongst the general public. It may also highlight the need for further public education around the condition, as well as prevention and detection of worrying skin lesions.

5.4. UK Summer 2018

This summer was one of the hottest on record, with a mean temperature of 17.2 degrees Celsius, closely exceeding 2006, 2003 and 1976 by <0.1 degrees Celsius. Google Trends did not reveal any significant increase about what was to be expected for 2006. This may be explained by the fact that average summer temperatures only vary by less than 1 degree Celsius and so this small difference fails to initiate a noticeable spike in searches. Additionally, Google has become exponentially more popular over the past 10 years, and so, it was less likely people would use the internet to search for these topics back then. Given the existing data, it is highly likely that search interest in sun protection, skin lesion and artificial tanning is set to rise further in the future.

5.5. Comparison with Other Countries

5.5.1. Australia

Australia's search interest in sun protection represents a similar cycle to the UK, given their summer season is November-January as opposed to May-July. Many years display a biphasic peak, one during November and the other during January. This suggests their skin cancer campaigns are more effective, resulting in a proportion of their public searching for sun protection before the spikes in temperature and UV exposure in summer. No initiative is 100% effective, and so, a second peak exists during January as the remaining proportion of the population look for these products post-exposure.

Almost 14,000 melanomas were diagnosed in Australia by the end of 2018⁵. However, despite having the highest incidence of melanoma worldwide, Australia also features successful and cost-effective public education and awareness, with almost \$4 worth of savings achieved for every \$1 invested [6]. The largest nationally recognised campaign is SunSmart which launches regular mass-media schemes. Surveys have shown improvements in positive sun-protection behaviours, with a nationwide improvement in schools. Nevertheless, recent literature highlights the need for continued funding and maintenance to sustain the messages of these campaigns [7].

5.5.2. United States of America

The USA also displays a summer-winter cycle for searches of skin cancer and sun protection, with very narrow peaks for “sunscreen” every June. The term

“sunscreen” is used most in the USA, highlighting how differences in dialect reflect the popularity of search terms. The USA’s public awareness is provided from a number of sources, due to lack of nationally co-ordinated campaigns. Both the Skin Cancer Foundation and the American Academy of Dermatology (AAD) provide resources to increase education surrounding skin cancer. Furthermore the AAD launched the SHADE programme that targets children in addition to prevention and early recognition. This is supported by both the SunSavvy and SunWise initiatives. Like most countries, the costs of melanoma are on the rise [8], along with the incidence of the disease, climbing by almost 3% each year [9]. Contrary to this, the overall trend for skin cancer search volume has been slowly declining since 2004. This finding is supplemented by decreasing paediatric incidence from 2004-2010 [10].

5.5.3. Limitations

The searches for the term “mole” may be biased due to the fact the search results do not discriminate between benign skin lesions and the animal. There is no demographic data available behind the searches, which would be useful for campaign targeting. Google Trends presents its data as RSV, so quantitative statistical analysis is not possible due to a lack of gross figures. Nevertheless, levels of interest level can still be established, which is helpful for providing a picture of public health awareness.

6. Conclusion

The searches for artificial tanning, sun protection and skin cancer exist on a predictable cycle with peaks during the summer months and subsequent troughs during the winter. Artificial UV tanning interest spikes during May, whilst sun protection and skin lesion searches occur later in June. This is most likely after sun damage has occurred, and reflects a lack of awareness for sun prophylaxis. Search volumes in Australia and the USA suggest these populations are better educated and implement better health-related decisions regarding sun care.

Google Trends data is a useful tool for characterising search trends in skin cancer. UK public health campaigns could benefit by focusing efforts on the pre-summer period. It may also be useful to design service provision to meet increased presentations of these conditions during the warmer months of the year.

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Author Contributions

SC assisted with the concept development, conducted the searches on Google Trends, collected the data,

analysed the results and drafted the manuscript. MM assisted with the concept development, analysed the results, provided critical input into the direction of the paper, re-drafting and structure. RPJ assisted with the concept development, provided senior supervision and expertise across all aspects of the project.

Conflicts of Interests

None.

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Abbreviations

BAD British Association of Dermatologists
 NHS National Health Service
 RSV Relative Search Volume
 SPF Sun Protection Factor
 UV Ultraviolet

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Supplementary File

Table 1. Relative search volume (RSV) values the term “sunbed”, used to search Google Trends individually.

Search terms – Relative search volume (RSV)	
Year-Month	sunbed
2004-05	27
2004-12	11
2005-05	34
2005-12	14
2006-05	29
2006-12	15
2007-05	28
2007-12	16
2008-05	31
2008-12	11
2009-05	27
2009-12	9
2010-05	25
2010-12	10
2011-05	40
2011-12	16
2012-05	63
2012-12	22
2013-05	68
2013-12	24
2014-05	77
2014-12	23
2015-05	74
2015-12	24
2016-05	85
2016-12	29
2017-05	96
2017-12	30
2018-05	100

Data is provided from May and December annually from 2004-2018.

Table 2. Relative search volume (RSV) values for terms used to search Google Trends collectively; “sunbed”, “tanning bed” and “tanning salon”

Search terms – Relative search volume (RSV)			
Year-month	sunbed	tanning bed	tanning salon
2004-05	27	1	6
2004-12	12	2	5
2005-05	34	2	10
2005-12	14	1	10
2006-05	29	2	9
2006-12	15	1	4
2007-05	28	3	7
2007-12	16	1	5
2008-05	31	2	8
2008-12	11	1	4
2009-05	27	2	7
2009-12	9	<1	4
2010-05	25	2	6
2010-12	10	1	4
2011-05	40	3	9
2011-12	16	1	5
2012-05	63	5	12
2012-12	22	2	5
2013-05	68	5	12
2013-12	24	1	4
2014-05	77	4	11
2014-12	23	2	4
2015-05	74	5	10
2015-12	24	1	4
2016-05	85	5	10
2016-12	29	2	5
2017-05	96	6	10
2017-12	30	2	4
2018-05	100	6	9

Data is provided from May and December annually from 2004-2018.

Table 3. Relative search volume (RSV) values the term “sun cream”, used to search Google Trends individually.

Search terms – Relative search volume (RSV)	
Year-month	sun cream
2004-06	12
2004-12	2
2005-06	18
2005-12	4
2006-06	24
2006-12	2
2007-06	14
2007-12	3
2008-06	14
2008-12	3
2009-06	28
2009-12	4
2010-06	32
2010-12	4
2011-06	28
2011-12	5
2012-06	26
2012-12	5
2013-06	44
2013-12	5
2014-06	54
2014-12	7
2015-06	69
2015-12	5
2016-06	57
2016-12	9
2017-06	87
2017-12	8
2018-06	92

Data is provided from June and December annually from 2004-2018.

Table 4. Relative search volume (RSV) values for terms used to search Google Trends; “sun cream”, “sun protection”, “sunscreen”, “after sun” and “SPF”

Search terms – Relative search volume (RSV)					
Year-month	sun cream	sun protection	sunscreen	after sun	SPF
2004-06	11	16	14	3	10
2004-12	2	3	10	3	11
2005-06	17	17	25	5	16
2005-12	4	2	6	2	10
2006-06	23	17	19	7	18
2006-12	2	1	8	1	11
2007-06	13	9	18	5	14
2007-12	3	2	5	3	14
2008-06	13	12	13	5	19
2008-12	3	2	4	3	11
2009-06	26	11	24	9	21
2009-12	4	3	5	3	11
2010-06	30	9	23	7	17
2010-12	4	1	5	5	9
2011-06	27	9	22	11	21
2011-12	5	2	7	5	11
2012-06	25	6	22	10	24
2012-12	5	2	7	6	12
2013-06	41	11	44	17	36
2013-12	5	1	7	6	14
2014-06	51	13	46	21	38
2014-12	6	2	7	3	15
2015-06	65	16	57	16	45
2015-12	5	2	9	4	18
2016-06	54	14	50	18	45
2016-12	9	2	10	7	21
2017-06	83	15	80	30	61
2017-12	7	2	11	6	22
2018-06	87	17	92	31	73

Data is provided from June and December annually from 2004-2018.

Table 5. Relative search volume (RSV) values the term “mole”, used to search Google Trends individually

Search terms – Relative search volume (RSV)	
Year-month	mole
2004-06	56
2004-12	39
2005-06	54
2005-12	47
2006-06	56
2006-12	46
2007-06	52
2007-12	47
2008-06	61
2008-12	54
2009-06	57
2009-12	56
2010-06	66
2010-12	65
2011-06	66
2011-12	63
2012-06	66
2012-12	63
2013-06	76
2013-12	72
2014-06	79
2014-12	74
2015-06	80
2015-12	86
2016-06	85
2016-12	86
2017-06	89
2017-12	87
2018-06	89

Data is provided from June and December annually from 2004-2018.

Table 6. Relative search volume (RSV) values the term “skin cancer”, used to search Google Trends individually

Search terms – Relative search volume (RSV)	
Year-month	skin cancer
2004-06	84
2004-12	36
2005-06	78
2005-12	33
2006-06	73
2006-12	44
2007-06	73
2007-12	36
2008-06	77
2008-12	29
2009-06	72
2009-12	33
2010-06	54
2010-12	30
2011-06	69
2011-12	37
2012-06	57
2012-12	47
2013-06	67
2013-12	53
2014-06	96
2014-12	50
2015-06	87
2015-12	55
2016-06	77
2016-12	50
2017-06	82
2017-12	52
2018-06	95

Data is provided from June and December annually from 2004-2018.

Table 7. Relative search volume (RSV) values for terms used to search Google Trends; “mole”, “skin cancer”, “melanoma” and “malignant melanoma”

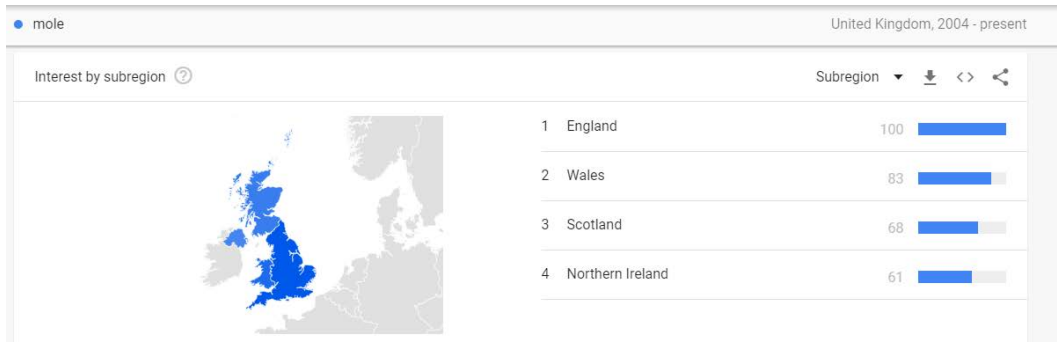
Month	Search terms – Relative search volume (RSV)			
	mole	skin cancer	melanoma	malignant melanoma
2004-06	54	35	15	2
2004-12	39	15	11	3
2005-06	54	32	14	4
2005-12	47	14	12	3
2006-06	56	30	14	2
2006-12	46	18	10	2
2007-06	52	30	10	2
2007-12	47	15	8	2
2008-06	61	32	14	2
2008-12	54	12	9	1
2009-06	57	30	16	2
2009-12	56	14	8	1
2010-06	66	23	14	2
2010-12	65	12	8	1
2011-06	66	29	14	2
2011-12	63	15	9	1
2012-06	66	24	12	2
2012-12	63	20	10	1
2013-06	76	28	15	2
2013-12	72	22	11	2
2014-06	79	40	20	3
2014-12	74	21	12	2
2015-06	80	36	20	2
2015-12	86	23	14	1
2016-06	85	32	17	2
2016-12	86	21	13	1
2017-06	89	34	18	2
2017-12	87	21	15	1
2018-06	89	39	20	2

Data is provided from June and December annually from 2004-2018.

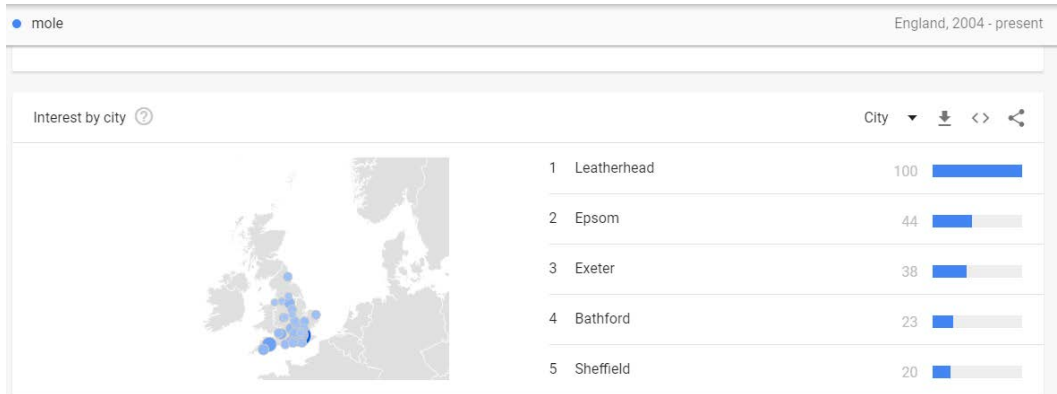
Table 8. Relative search volume (RSV) values for terms used to search Google Trends; “mole”, “sunbed”, “sun cream” and “skin cancer”

Month	Search terms – Relative search volume (RSV)			
	mole	sunbed	sun cream	skin cancer
2004-05	56	18	7	39
2004-12	46	6	2	18
2005-05	54	19	9	33
2005-12	48	7	2	13
2006-05	49	15	8	28
2006-12	49	7	1	20
2007-05	59	18	9	24
2007-12	49	9	2	16
2008-05	57	16	13	24
2008-12	59	6	1	12
2009-05	59	17	13	25
2009-12	53	6	2	13
2010-05	64	16	17	19
2010-12	66	7	2	13
2011-05	66	24	12	24
2011-12	66	10	3	16
2012-05	72	40	26	26
2012-12	64	14	3	20
2013-05	74	42	21	25
2013-12	71	14	4	21
2014-05	83	48	32	34
2014-12	74	14	4	21
2015-05	86	46	27	41
2015-12	83	16	3	24
2016-05	91	53	42	33
2016-12	87	18	5	21
2017-05	93	58	43	31
2017-12	83	19	4	21
2018-05	100	62	62	42

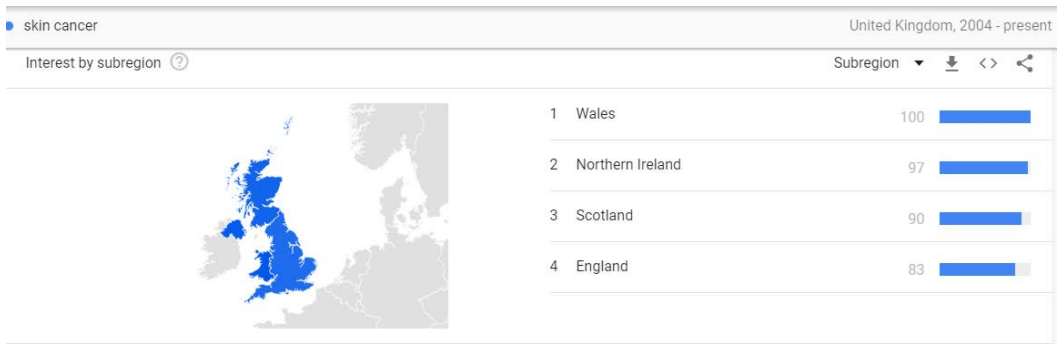
Data is provided from June and December annually from 2004-2018.



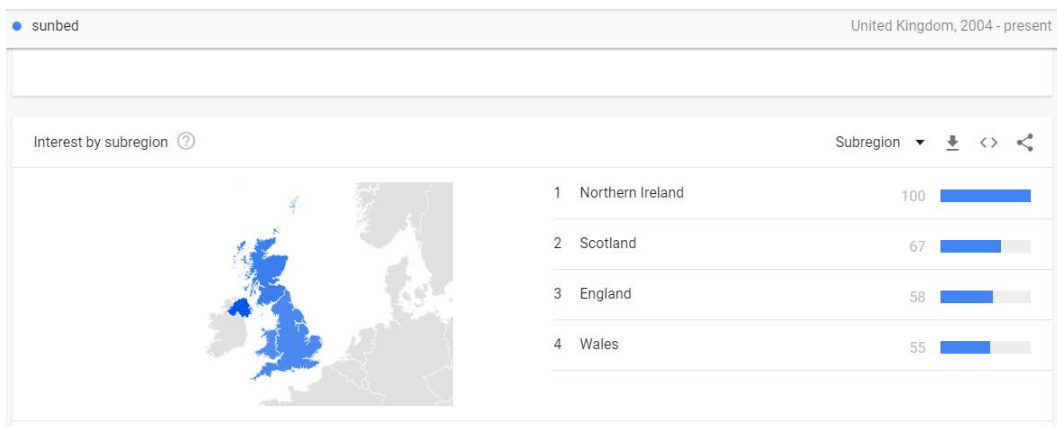
Searches within countries of UK (mole)



Searches within English cities (mole)



Searches within countries of UK (skin cancer)



Searches within countries of UK (sunbed)

