Cancer Association of South Africa (CANSA)

Fact Sheet

On

Basal Cell Carcinoma

Introduction
Basal cell carcinoma, or BCC, is a type of skin cancer. It involves the basal cells of the skin at the bottom of the epidermis. It is very common and accounts for the majority of skin cancers in South Africa. Most Basal Cell Carcinomas are very slow-growing and seldom spread to other parts of the body. It often starts as a small, red, shiny spot or nodule that may bleed occasionally.

[Picture Credit: Basal Cell Carcinoma Picture]

Incidence of Basal Cell Carcinoma in South Africa
According to the National Cancer Registry (2014) the following number of Basal Cell Carcinoma cases was histologically diagnosed in South Africa during 2014:

<table>
<thead>
<tr>
<th>Group</th>
<th>2014 Actual No of Cases</th>
<th>Estimated Lifetime Risk</th>
<th>Percentage of All Cancers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All males</td>
<td>9 327</td>
<td>1:17</td>
<td>25.35%</td>
</tr>
<tr>
<td>Asian males</td>
<td>48</td>
<td>1:116</td>
<td>5.16%</td>
</tr>
<tr>
<td>Black males</td>
<td>373</td>
<td>1:281</td>
<td>3.36%</td>
</tr>
<tr>
<td>Coloured males</td>
<td>904</td>
<td>1:15</td>
<td>21.49%</td>
</tr>
<tr>
<td>White males</td>
<td>8 003</td>
<td>1:5</td>
<td>38.87%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>2014 Actual No of Cases</th>
<th>Estimated Lifetime Risk</th>
<th>Percentage of All Cancers</th>
</tr>
</thead>
<tbody>
<tr>
<td>All females</td>
<td>7 034</td>
<td>1:32</td>
<td>18.01%</td>
</tr>
<tr>
<td>Asian females</td>
<td>46</td>
<td>1:198</td>
<td>3.89%</td>
</tr>
<tr>
<td>Black females</td>
<td>375</td>
<td>1:409</td>
<td>2.33%</td>
</tr>
<tr>
<td>Coloured females</td>
<td>726</td>
<td>1:29</td>
<td>17.73%</td>
</tr>
<tr>
<td>White females</td>
<td>5 888</td>
<td>1:7</td>
<td>35.84%</td>
</tr>
</tbody>
</table>

Researched and Authored by Prof Michael C Herbst
[D Litt et Phil (Health Studies); D N Ed; M Art et Scien; B A Cur; Dip Occupational Health; Dip Genetic Counselling; Dip Audiometry and Noise Measurement; Diagnostic Radiographer; Medical Ethicist]
Approved by Ms Elize Joubert, Chief Executive Officer [BA Social Work (cum laude); MA Social Wok]
April 2019
The frequency of histologically diagnosed cases of Basal Cell Carcinoma in South Africa for 2014 were as follows (National Cancer Registry, 2014):

<table>
<thead>
<tr>
<th>Group - Males</th>
<th>0 – 19 Years</th>
<th>20 – 29 Years</th>
<th>30 – 39 Years</th>
<th>40 – 49 Years</th>
<th>50 – 59 Years</th>
<th>60 – 69 Years</th>
<th>70 – 79 Years</th>
<th>80+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>All males</td>
<td>5</td>
<td>68</td>
<td>341</td>
<td>985</td>
<td>1,950</td>
<td>2,541</td>
<td>2,253</td>
<td>1,052</td>
</tr>
<tr>
<td>Asian males</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>12</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Black males</td>
<td>3</td>
<td>6</td>
<td>23</td>
<td>35</td>
<td>71</td>
<td>95</td>
<td>89</td>
<td>46</td>
</tr>
<tr>
<td>Coloured males</td>
<td>1</td>
<td>7</td>
<td>30</td>
<td>89</td>
<td>199</td>
<td>254</td>
<td>218</td>
<td>101</td>
</tr>
<tr>
<td>White males</td>
<td>5</td>
<td>34</td>
<td>226</td>
<td>740</td>
<td>1,491</td>
<td>2,062</td>
<td>1,866</td>
<td>1,081</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group - Females</th>
<th>0 – 19 Years</th>
<th>20 – 29 Years</th>
<th>30 – 39 Years</th>
<th>40 – 49 Years</th>
<th>50 – 59 Years</th>
<th>60 – 69 Years</th>
<th>70 – 79 Years</th>
<th>80+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>All females</td>
<td>7</td>
<td>73</td>
<td>301</td>
<td>835</td>
<td>1,355</td>
<td>1,781</td>
<td>1,610</td>
<td>972</td>
</tr>
<tr>
<td>Asian females</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Black females</td>
<td>0</td>
<td>14</td>
<td>25</td>
<td>67</td>
<td>82</td>
<td>96</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>Coloured females</td>
<td>0</td>
<td>5</td>
<td>36</td>
<td>92</td>
<td>155</td>
<td>186</td>
<td>146</td>
<td>95</td>
</tr>
<tr>
<td>White females</td>
<td>7</td>
<td>54</td>
<td>234</td>
<td>669</td>
<td>1,132</td>
<td>1,490</td>
<td>1,396</td>
<td>827</td>
</tr>
</tbody>
</table>

N.B. In the event that the totals in any of the above tables do not tally, this may be the result of uncertainties as to the age, race or sex of the individual. The totals for ‘all males’ and ‘all females’, however, always reflect the correct totals.

Symptoms of Basal Cell Carcinoma

Basal cell carcinomas usually develop on sun-exposed parts of your body, especially on the head and neck. A much smaller number occur on the trunk and legs. Basal cell carcinomas can also occur on parts of the body that are rarely exposed to sunlight. Although a general warning sign of skin cancer is a sore that won’t heal or that repeatedly bleeds and scabs over, basal cell cancer may look like:

- A pearly white or waxy bump. In darker skinned people, this type of cancer is usually brown or black
- A flat, scaly, brown or flesh-coloured
- More rarely, a white, waxy scar

Risk Factors for Basal Cell Carcinoma

- The following individuals are more likely to get basal cell carcinoma:
  - Overexposure to X-rays or other forms of radiation
  - Having many moles
  - Many severe sunburns early in life (especially before age 18)
  - Long-term daily sun exposure (such as the sun exposure people who work outside receive)
Reducing the Risk for Basal Cell Carcinoma
While BCCs and other skin cancers are almost always curable when detected and treated early, it is best to prevent them in the first place. Make these sun safety habits part of daily health care routine:

- Stay out of direct sunlight especially between 10:00 and 15:00
- Never stay in the sun until the skin burns
- Avoidance of tanning booths
- Wearing adequate protective clothing, including a broad-brimmed hat
- Wearing UV-blocking sunglasses (minimum UV400 protection)
- Use a broad spectrum 30 to 50 SPF according to skin colour
- Apply sunscreen at least 20 minutes before going out into the sun
- Reapply sunscreen every two hours including after swimming or excessive sweating
- Keep newborns out of the sun until at least 6 months of age
- Examine the skin head-to-toe every month
- See a doctor or other qualified health professional every year for a professional skin examination
- Avoid surfaces that reflect light more, such as water, sand, concrete, and white-painted areas

“UVR in sunlight causes mutations that drive basal cell carcinomas. However, the incidence of these tumors plateaus with prolonged exposure, but the incidence of other skin cancers increases. Makarova et al. now show that vitamin D₃ produced in the skin by UVR protects against its oncogenic effects by inhibiting Hedgehog signaling, whereas dietary vitamin D₃ does not.”

Five Warning Signs of Basal Cell Carcinoma
Frequently, two or more of features are present in one tumour. In addition, BCC sometimes resembles non-cancerous skin conditions such as psoriasis or eczema.

Only a trained physician or health care professional, such as an oncology nurse or specialist in diseases of the skin, can determine for sure. If any of the warning signs are observed or some other worrisome change in the skin is noticed, one should consult a physician immediately.

A scar-like area that is white, yellow or waxy, and often has poorly defined borders; the skin itself appears shiny and taut. This warning sign may indicate the presence of an invasive BCC that is larger than it appears to be on the surface.
An open sore that bleeds, oozes, or crusts and remains open for a few weeks, only to heal up and then bleed again. A persistent, non-healing sore is a very common sign of an early BCC.

A reddish patch or irritated area, frequently occurring on the face, chest, shoulders, arms, or legs. Sometimes the patch crusts, and it may also itch. At other times, it persists with no noticeable discomfort.

A shiny bump or nodule that is pearly or translucent and is often pink, red, or white. The bump can also be tan, black, or brown, especially in dark-haired people, and can be confused with a mole.

A scar-like area that is white, yellow or waxy, and often has poorly defined borders; the skin itself appears shiny and taut. This warning sign may indicate the presence of an invasive BCC that is larger than it appears to be on the surface.

**Diagnosis of Basal Cell Carcinoma (BCC)**

Basal Cell Carcinoma of the skin can be mistaken for other, more benign lesions. The only way to accurately diagnose basal cell carcinoma (BCC) of the skin, is with a skin biopsy.

In the event of any skin changes, one should visit a dermatologist for an accurate assessment.

**CONTEXT:** Basal cell carcinoma (BCC) is the most common human malignant neoplasm and is a frequently encountered diagnosis in dermatopathology. Although BCC may be locally destructive, it rarely metastasizes. Many diagnostic entities display morphologic and immunophenotypic overlap with BCC, including nonneoplastic processes, such as follicular induction over dermatofibroma; benign follicular tumors, such as trichoblastoma, trichoepithelioma, or basaloid follicular hamartoma; and malignant tumors, such as sebaceous carcinoma or Merkel cell carcinoma. Thus, misdiagnosis has significant potential to result in overtreatment or undertreatment.

**OBJECTIVE:** To review key features distinguishing BCC from histologic mimics, including current evidence regarding immunohistochemical markers useful for that distinction.

**DATA SOURCES:** Review of pertinent literature on BCC immunohistochemistry and differential diagnosis.

**CONCLUSIONS:** In most cases, BCC can be reliably diagnosed by histopathologic features. Immunohistochemistry may provide useful ancillary data in certain cases. Awareness of potential mimics is critical to avoid misdiagnosis and resulting inappropriate management.

**Staging of Basal Cell Carcinoma**

Staging is the process of determining whether cancer has spread and, if so, how far. It is important to know the stage of the disease in order to plan treatment.

Stages are numbered in Roman numerals between 0 and IV:

- **Stage 0.** Cancer is found only in the original tumour in the skin. Stage 0 is also called carcinoma *in situ*.
- **Stage I.** The tumour is 2 centimetres wide or smaller.
- **Stage II.** The tumour is larger than 2 centimetres and may have spread from the epidermis into the dermis.
- **Stage III.** The cancer has spread to areas below the skin.
- **Stage IV.** The cancer can be any size and has spread to distant lymph nodes or...

**Treatment of Basal Cell Carcinoma**

Basal cell carcinoma very rarely spreads to other parts of the body, although it can grow into nearby tissues if not treated. Choice of treatment depends on factors such as the tumour size and location, the patient’s age, general health, and preferences.

Treatment may include one or more of the following:

- Curettage and Electrodesiccation
- Simple Excision
- Mohs’ surgery
- Radiation Therapy
- Immune Response Modifiers, Photodynamic Therapy, or Topical
- Targeted Therapy for Advanced Basal Cell
“The global incidence of non-melanoma skin cancer continues to increase as the global population ages with the highest incidence in the world occurring in Australian and New Zealand patients. There are numerous treatment options available for non-melanoma skin cancer patients of which radiotherapy is an efficacious and versatile tissue preserving non-surgical (or medical) option. In patients where excision may not be an option (medically/technically inoperable) or considered less ideal (e.g. cosmetic outcome), radiotherapy offers an excellent option. Following surgery, adjuvant radiotherapy in patients with unfavourable pathology can decrease the risk of recurrence and associated morbidity. Elderly and co-morbid patients with poor performance status can benefit from short-course hypofractionated radiotherapy in the setting where surgery is not an option. As with any modality, radiotherapy has advantages and disadvantages and it is therefore important for clinicians to appreciate these. We aim to present an update for clinicians that manage patients with non-melanoma skin cancer on the role of radiotherapy.”

AIM: Basal Cell Carcinoma (BCC) alone accounts for 80% of cases of non-melanoma skin cancer (NMSC), which characteristically develops on sun-exposed skin. Indeed the most common site of BCC is the head and neck region (80%). The purpose of this study to review the experience of our center with BCC in the head and neck region to report the sites of occurrence and treatment.

MATERIALS AND METHOD: We retrospectively reviewed 77 patients with BCC of the head and neck, who revived surgical treatment within our plastic surgery division. Basic demographic data, cancer site and size, surgical treatment and histological data were collected. The mean follow-up period was 12 months.

RESULTS: The study population included 37 males and 40 females, with a mean age of 74.12 years. The nasal unit was the main site of BCC (31.82%), followed by the periorbital (13.64%) and cervical (12.5%) units. Primary closure was the main surgical procedure performed (72.5%), followed by local flap (26.1%) and full-thickness skin grafts (1.4%). The safety resection margin ranged from 4.5 to 9 mm, with a 98.7% complete removal rate. Neither recurrence nor any newly-developed lesions were reported during follow-up in any patient.

DISCUSSION: Our work reflects the shift in the incidence of BCC, which now seems to be more frequent in females. Furthermore, our data strengthens the association between UVR exposure and BCC, confirms its predilection to occur on the nasal unit and validates surgical excision as the gold standard treatment for skin cancer.

Complications of Basal Cell Carcinoma
Complications of basal cell carcinoma may include:

- A risk of
- An increased risk of other types of skin
- Cancer that spreads beyond the

Medical Disclaimer
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Basal Cell Carcinoma


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