

Melanoma—What Is Your Risk?

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Melanoma is a cancer arising from pigment producing cells of the skin called melanocytes. It is considered an epidemic cancer in the US, Australia, New Zealand and Europe, where there is a rapid increase in incidence. The rate of rise of melanoma is faster than that of any of the seven most common cancers. Although primarily a disease of older age, in light-skinned individuals it is the most common cancer in young adults (25–29 years) and second most common in adolescents and young adults (15–29 years). Before the age of 40 the incidence is higher in women, but after this the incidence rapidly increases in men. It accounts for 3% of all skin cancers, but 75% of skin cancer-related deaths with one person dying of the disease every 62 minutes.

Like other cancers however, there is a near 100% cure rate with excision when detected early. That begs the question—What puts an individual at in-

creased risk and what preventive measures can be taken?

1. An increased number of moles regardless of atypia, is an important risk factor. Atypical moles, however, greatly increase the risk, with a 10-fold increase conferred by the presence of 5 atypical moles. Atypical moles and early melanomas can be detected using the well-known acronym **ABCDE** (**A**symmetry, **B**order irregularity, **C**olor depth/variability, **D**iameter >0.5cm, **E**volution/recent change). Some melanomas are non-pigmented and awareness of a new “mole” may be the only means of early detection; regular self-examination and follow-up with your doctor are important.
2. Most cancers, including melanomas, have both environmental and genetic factors that lead to their development. A family history of melanoma (first degree relatives) confers a two-fold increased risk of melanoma.

Two major genes have been identified in familial cases: CDKN2A and CDK4, both are important in controlling cell division. Interestingly, recent research suggests a link between breast cancer and melanoma. Patients with breast cancer have a 1.4–2.7 times increased risk of developing melanoma, while women with melanoma have a 1.4 times increased risk of breast cancer. This suggests a genetic link between these two common cancers.

3. Other host factors associated with increased risk are light complexion, inability to tan without burning, and extent of freckling.
4. Ultraviolet radiation (UVR) exposure is the major environmental risk factor for

melanoma, with cumulative sun exposure being more important than intermittent exposure. Sunburns at any time of life (childhood and adult life) conferred an almost two-fold increased risk. UVR exposure in adolescents and young adults is a particular concern with the use of tanning beds. First exposure to tanning beds in youth increases the risk of melanoma by 75%. The increased use of tanning beds may explain the higher incidence of melanoma in young women as compared to young men.

Preventive strategies should be aimed at better education about and protection from sun and UV exposure for children and adults. In Australia and New Zealand public education such as *Slip! Slap! Slop!*, *SunSmart*

and *Me No Fry*, and professional education through skin cancer awareness programs have had a significant impact on melanoma awareness and sun exposure and tanning behaviors. There are sun protection strategies in schools such as sunshades in schoolyards and the mandatory use of sunscreen and sunhats (part of the school supplies list) for outdoor activities during the school day. As a result, the increase in incidence and melanoma deaths has slowed in these countries. Only 3.4% of 412 elementary schools in US cities with a reported UV index have a sun protection policy. There is a need for increasing public education about melanoma starting at the elementary school level, with improved sun and tanning behavior in all age groups, in an effort to slow the rate of rise in the US of this aggressive cancer.

Dr. Shashi Baksh is board certified in Dermatopathology. Dr. Shashi Baksh and Dr. Fabien Baksh co-founded Pennsylvania Specialty Pathology LLC (PSP) in 2008 in order to provide regional physicians with high quality, prompt, and personalized diagnostic services. **Dr. Fabien Baksh** is fellowship trained in Surgical and Gastrointestinal Pathology, with an emphasis in molecular research. Both are board certified in Anatomic and Clinical Pathology.

Skin Cancer Prevention

by Nancy Grand and
Dr. Shashi Baksh

We read the magazine and journal articles in April and May reminding us about skin cancer prevention: using a broad-spectrum water-resistant sunscreen (protecting against UVA/UVB) with 15 SPF or more, wearing protective clothing, limiting sun exposure (especially during peak hours) and tanning beds, and checking moles with monthly skin self-exams. But now that we are in the midst

of the hot steamy summer, are we remembering to be vigilant in protecting ourselves from one of the most preventable and curable cancers if detected early?

More than two million people in the United States are diagnosed with skin cancer annually. Skin cancer predominately affects people with light colored skin, hair and eyes, and develops primarily on sun-exposed areas. Approximately 90% of non-melanoma skin cancers are associated

with exposure to UV radiation from the sun.

The most common indicator is a change in the appearance of your skin, a new growth or a non-healing sore. The three major types of skin cancer are basal cell carcinoma, squamous cell carcinoma, and melanoma.

Basal cell carcinoma is the most common form of skin cancer, which develops from the abnormal growth of cells in the lowest/deepest layer of the epidermis. It usually occurs in sun-exposed areas, frequently on the face, chest, shoulders, arms or legs. Warning

signs/symptoms include an open sore that bleeds, a reddish patch, a shiny, pearly or translucent bump, a centrally indented pink nodule with rolled borders, or a scar-like waxy area with a poorly defined border.

Squamous cell carcinoma, involves changes in the squamous cells of the epidermis. It can occur on any part of the body including mucous membranes and genitals, but most frequently appears on sun-exposed skin, such as the ears, lips, face, scalp, neck, hands, arms and legs. Warning

signs/symptoms include a persistent, scaly red patch with irregular borders that can bleed or crust, an elevated growth with central depression, a non-healing sore, or a wart-like growth.

Melanoma can develop anywhere on the body, and on mucous membranes and skin that has not been exposed to the sun. See article above for more detailed information on melanoma.

Routinely examining your skin for any changes is essential to help detect skin cancer early when it is the most treatable. Have a safe and enjoyable summer!

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Carleen Myers, CRNP, The Center for Aesthetic & Reconstructive Surgery of York

I have been using PSP Pathology Services now for a few years. I could not be happier with their service and the rapid turnaround and the accuracy of their diagnoses. I have personally used them and their interpretation was almost identical to an interpretation given by a Bethesda Laboratory at their personal request of a second opinion. I recommend PSP without reservation.

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