# Malignant Melanoma in African Americans

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*Although rare, malignant melanoma (MM) is a real and serious risk for African Americans. African Americans have a proportionately higher incidence of acral melanoma, both the acral lentiginous melanoma (ALM) histologic subtype and subungual melanoma (SM). MM is more likely to be diagnosed at a later stage in African Americans and carries a worse prognosis. Given these facts, the relatively simple and inexpensive primary and secondary preventions for MM should be standard, particularly in the African American patient.*

According to the National Cancer Institutes 1994 Report, the incidence of malignant melanoma (MM) rises 6% per year,[1] making it the sixth most common cancer in the United States.[2] In 2000, the estimated lifetime risk of developing MM was 1 in 75.[3] The mortality rate for MM is approximately 2.2 per 100,000 patients, accounting for the majority of deaths from cutaneous malignancy.[4] Efforts to disseminate these facts have heightened public awareness of the disease, but one misconception that still exists is that MM is a disease limited to fair-skinned individuals. Although it is true that patients with Fitzpatrick skin types I and II account for most cases of MM, melanoma is equally dangerous in darker pigmented individuals.

Risk factors for MM in African Americans include exposure to ultraviolet light, blistering sunburns, albinism, burn scars, x-rays, preexisting pigmented lesions[5] and history of trauma.[6] Despite the fact that African Americans account for a disproportionate number of the cases of acral lentiginous melanoma (ALM) on the hands, most MM in African Americans occurs on areas of the body not normally exposed to sun.

The annual incidence of MM ranges from 2 to 17 per 100,000 white patients, compared with 0.5 to 1.1 per 100,000 African Americans.[7] For ALM, subungual melanoma (SM), and plantar melanoma, there is no difference in incidence rates between races.[8-10] The difference in overall incidence rates of MM appears to be accounted for by the reduction in nonacral MM in African Americans.[8] This difference may relate to the protective effects of increased pigmentation and melanin photoprotection. It has been postulated that sun exposure, which is a risk factor for other types of MM, is not involved in the pathogenesis of these types of MM; however, no evidence in favor of this theory has been produced.

There is an equal incidence of MM between sexes in African Americans. The most common primary sites are the sole, palm, finger, and toe.[6,7] One study found that 66% of patients had a histologic diagnosis of ALM. The study also found African Americans to have a higher incidence of ulceration at the primary site (41% versus 24.4% in whites).[7] Although ulceration is a useful diagnostic clue, it may reflect later-stage diagnosis in African American patients.

The Duke University Melanoma Clinic Registry (7500 patients with melanoma, 79 of whom were classified as African American) also reported poor survival rates for African Americans with melanoma.[7] The California Cancer Registry also found a relatively lower 5-year survival rate for African Americans (70%) as compared with white patients (87%). African Americans were more likely than whites to be diagnosed with advanced melanoma.[11]

The Duke group reported an encouraging trend toward a greater survival rate during the past 20 years. African American patients diagnosed prior to 1980 had only a 35% 5-year survival rate, but those diagnosed from 1989 to 1990 had a 49% 5-year survival rate. Between 1989 and 1990, patients presented with less advanced disease, possibly due to greater awareness by patients and physicians alike.[7] This data highlights the role that public health campaigns can play in the long-term survival of even darkly pigmented individuals.

Normal variations in African American skin can make the diagnosis of melanoma difficult.

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Hyperpigmented macules of the palmar creases occur in approximately 60% of African American adults, usually on the soles and palms. They can measure 2 mm to several centimeters in diameter.[12] Concern regarding MM, particularly ALM, should arise for lesions with asymmetry, border irregularity, color variegation, and diameter greater than 6 mm.[13]

Longitudinal melanonychia, usually favoring the thumb and index finger, also can be difficult to distinguish from SM. Clues pointing toward malignancy include solitary lesions (particularly of the thumb or great toe), width greater than 3 mm, variegation in pigment (brown to dark black), rapid increase in size, and Hutchinson's sign (extension of pigment to involve proximal or lateral nail fold).[14]

Preexisting nevi are also risk factors for development of MM. It is estimated that anywhere between 7.6% and 66% of MM cases arise in a preexisting nevus.[6,15] It also has been estimated that 92.6% to 97.6% of African American patients have at least one nevus on their body.[15] Of 251 African American patients examined at the Charity Hospital of Louisiana, the average number of nevi was 8.3 per patient, with 24.7% occurring on the palms and 22.3% on the soles. Similar observational studies of African American patients from 1963 to 1979 found the average number of nevi to range from 2 to 11 per patient.[15] Hence, melanocytic nevi in darker-skinned patients are preponderantly acral. This may account for the increase in acral MM in African Americans.

ALM accounts for a greater proportion of melanomas in African Americans.[11] They occur on glabrous skin, which includes the palms and the soles of the feet, and the subungual and mucosal surfaces of the body.[9] A retrospective review of the melanoma registry at the University of Illinois College of Medicine revealed 56 cases (3% of the total 2102 cases) of ALM. Thirty-four percent of the patients were African American, 61% were white, and the remainder were Hispanic or Asian. The study found the incidence of ALM of the sole to be the same in all races. The study also found that histologic subtype of ALM alone does not affect outcome.[10] The poor prognosis often seen with ALM seems to be related to a later stage at diagnosis.[11] Another retrospective 10-year study of MM revealed that the incidence rate of PM was 1.7 per million per year in African Americans and 2 per million per year in white patients, which is not statistically different.[8]

SM accounts for a higher percentage of MM in African Americans. A review of 9000 cases of melanoma diagnosed between 1970 and 1996 at Duke University revealed 93 cases (1%) of SM.[9] African Americans accounted for 12% of the cases, although they comprised less than 1% of the total cases of melanoma. Most presented as a pigmented linear streak of the nail bed that was benign-appearing and asymptomatic. Fifty-five percent of the lesions arose on the hands, and the thumb was involved in 52% of cases. African Americans had 2.6 times the death rate compared with white patients, even when controlled for stage of disease.

Because of the proportionately increased incidence of acral MM, later stage at diagnosis, and worse prognosis for African Americans, the importance of both patient and physician monitoring of pigmented lesions, particularly on the palms, soles, and nail bed, cannot be overstated. With continued preventive measures, screening, and monitoring, we can hope to battle a cancer that is particularly amenable to early detection. Primary prevention campaigns, such as teaching sun avoidance and sun protection, and secondary preventions, such as teaching self-examination and physician screening, must be implemented for people of all skin types.

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