Melanoma Risk Linked to Indoor Tanning, Study Affirms

By Ruth Kava — January 27, 2016

[1] Of the three most common types of skin cancer basal cell, squamous cell and melanoma the last is the most deadly. Melanoma can and does metastasize to other organs, including the brain (as we recently learned in the case of former president Jimmy Carter). Although preventing or stopping it is an important and active area of current research, no sure-fire way to prevent or cure melanoma has yet been found.

It has long been suspected that exposure to UV light, e.g. sunlight, can instigate skin changes that lead to melanoma. That's why doctors have repeatedly warned against sun exposure, as well as both outdoor and indoor tanning.

The wisdom of those warnings is supported by a recent report in *JAMA Dermatology* linking the risk of melanoma with indoor tanning. The link was particularly strong for women who had (1) begun tanning at younger ages, and (2) had more frequent tanning sessions.

Dr. DeAnn Lazovich of the University of Minnesota, and colleagues, studied 681 patients who had been diagnosed with melanoma between 2004 and 2007 when they were less than 50 years old, and compared their indoor tanning histories to those of about 650 patients without such a diagnosis. These control patients were between 25 and 49 years old. Women made up approximately 68 percent of each group.

In the initial contact, participants completed a questionnaire about their use of indoor tanning equipment and diagnoses. If they responded that they had used any of five types of such equipment, they were followed up via telephone interview about when they initiated tanning and related questions.

The investigators found that indoor tanning was most common in women diagnosed with melanoma when they were less than 40 years old, and this was significantly different from the frequency of tanning in control women. Further, the diagnosed women typically began indoor tanning at younger ages than did the control women 16 versus 25 years of age.

Although men were, in general, significantly less likely to use indoor tanning than women (44 vs.
78 percent reported such use), in the 30-to-49 year age group, 48 percent of those with a melanoma diagnosis reported indoor tanning exposure, compared to 42 percent of those without such a diagnosis. This difference was not statistically significant, perhaps because the number of men was relatively small.

The risk of melanoma was significantly elevated by use of indoor tanning, and it was also affected by the age at which such use began. Thus, the risk was six-fold greater for women diagnosed at less than 30 years of age than for women who didn't use indoor tanning. These women also reported using indoor tanning more than 10 times. For women who were older when they were diagnosed, the risk of melanoma ranged from two- to five-fold greater, depending on the age of initiation of indoor tanning use.

In an accompanying editorial [3], Dr. Gery P. Guy Jr. of the CDC and coauthors commented that, "Reducing exposure to UV radiation from indoor tanning is an important strategy for melanoma prevention. Ongoing surveillance can be used to determine the impact of policies on reducing the use of indoor tanning and the incidence of melanoma."