

TEST YOUR SKIN CANCER IQ

Skin cancer is sometimes more than meets the eye. Deception is common. The questions and answers that follow are designed to raise awareness about its complexity and provide only a glimpse into this diverse subject.

Your answers can include more than one choice.

Question #1

Which of the following has been shown to decrease the development of cutaneous basal and squamous cell carcinomas and actinic keratoses?

- a. Paleo diet
- b. Atkins diet
- c. low salt diet
- d. low fat diet

Answer: d

Animal and human studies have demonstrated that a high fat diet could promote ultraviolet radiation-induced skin cancer development. In contrast, a low fat diet has been shown to decrease the rate of skin cancer development. One caveat is that the type of fat consumed was not specified in this study. Since the subjects were on a standard American diet (SAD), one can assume it consisted predominantly of the unhealthy variety. Whether healthy fats obtained from nuts, seeds, avocados, and extra virgin olive oil would have a similar effect is unknown.

Question #2

Which of the following can be the presenting color of a melanoma?

- a. black
- b. brown
- c. red
- d. white
- e. grey

Answer: a, b, c, d, e

Melanoma is typically thought of as dark black or brown spot or bump on the skin due to the abundance of the pigment known as melanin in the cancer cells and surrounding tissue. Amelanotic melanoma is a melanoma in which this pigment is not present in sufficient quantities to give it its usual dark color. Amelanotic melanomas can be red or even the same color as normal skin. While the ABCDEs, which stand for asymmetry, (irregular) borders, (multiple) colors, diameter (>6mm), evolution (changing lesion) are quite useful for diagnosing melanoma (as well as other skin cancers), some or all of these criteria may not be present in a given lesion. For me, U for ugly duckling is at the top of the list. The appearance of any spot or growth that appears or acts differently from all of your other spots or moles stipulates that it is time to raise the red flag.

Question #3

All basal cell carcinomas are created equal and can be treated by any of several methods with similar cure rates.

- a. True
- b. False

Answer: b - false

There are numerous forms of basal cell carcinoma based on what is seen when examining a patient in the office and based on what the pathologist sees when examining the biopsy under the microscope. A common type of basal cell carcinoma is the nodular type. When present below the neck, nodular basal cell carcinomas can be treated by a method known as curettage. This method involves scraping the tumor out and has a high success rate because the typical basal cell carcinoma is softer than the surrounding normal tissue. This method is frequently replaced by surgical excision on the face because of cosmetic concerns or proximity to vital structures such as the eyes or nose.

Another type of basal cell carcinoma is the pigmented type. The typical basal cell carcinoma has a pearly appearance and may have a red tinge. Pigmented basal cell carcinomas can be brown, grey, or black and simulate a benign mole or a melanoma.

Two types of basal cell carcinoma, which do better if surgically excised rather than scraped out, are the infiltrating basal cell carcinoma and the fibrosing or morpheaform basal cell carcinoma. Both have ill-defined margins, and in the latter type, the tumor is admixed with scar tissue and is not amenable to treatment with the scraping method. Both types require excision and evaluation by a pathologist or specially trained dermatologic surgeon to check that the margins are clear of cancer.

Finally, it is not uncommon for more than one of these patterns to be present in one lesion. That is one reason I have a microscope in my office and look at each biopsy before deciding on the most appropriate course of treatment.

Question #4

The most deadly skin cancer is

- a. squamous cell carcinoma
- b. dermatofibrosarcoma protuberans
- c. malignant melanoma
- d. Merkel cell carcinoma
- e. basal cell carcinoma

Answer: d

Merkel cell carcinoma, also referred to as neuroendocrine carcinoma of the skin, is believed to arise from cells of the same name which are located in the lower layers of the epidermis and of the hair follicles. Merkel cells may function to sense physical stimuli. Merkel cell carcinoma is a rare skin cancer with an incidence of about 2,000 cases per year in the US, but this number is on the rise. Merkel cell carcinoma will prove fatal in roughly 1/3 of patients. Merkel cell carcinoma is also the most challenging skin cancer to diagnose as it can simulate a benign lesion or one of the much less aggressive skin cancers. For me, this is the prototypical “wolf in sheep’s clothing.”

Question #5

Increased intake of which of the following is associated with reduced risk for basal cell carcinoma in humans?

- a. coffee
- b. tea
- c. vitamin E
- d. vitamin C

Answer: a and b

Coffee and tea intake, including in some instances the decaffeinated varieties, have been associated with numerous health benefits. A recent study concluded that coffee and tea also provide a modest protective effect in relation to the development of basal cell carcinoma, but only if they are of the caffeinated variety. It should be kept in mind that in certain individuals, caffeine consumption can be associated with significant detrimental effects on one’s health.

Vitamin E and C-rich fruit are positively associated with less dermal elastosis and cutaneous aging but have not definitively shown to prevent skin cancer in humans. The list of botanicals that have shown effectiveness in laboratory studies, however, is long and impressive.

The take-home message is to keep an eye out for that *ugly duckling*, get regular skin exams, and enjoy your morning cup of Joe (minus the sweeteners and creamers).

1. Black, H.S., *Influence of dietary factors on actinically-induced skin cancer*. *Mutat Res*, 1998. **422**(1): p. 185-90.
2. Song, F., A.A. Qureshi, and J. Han, *Increased caffeine intake is associated with reduced risk of basal cell carcinoma of the skin*. *Cancer Res*, 2012. **72**(13): p. 3282-9.