Dermatology Reports

Is ChatGPT a reliable informant? Dermatologists review AI-generated answers to frequently asked questions about melanoma

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SUPPLEMENTARY MATERIAL

Supplementary Table 1. FAQs submitted to ChatGPT, with each response provided by the AI tool.

N	Question	ChatGPT
1	What is melanoma?	Melanoma is a type of skin cancer that develops from melanocytes, the cells responsible for producing melanin (the pigment that gives skin its color). It is considered the most dangerous form of skin cancer because it can spread to other parts of the body if not detected and treated early.
2	Who is at greatest risk of developing melanoma?	People at the greatest risk include: - Those with fair skin, light hair, and light eyes. - Individuals with a history of sunburns, especially during childhood. - People with many moles or atypical (unusual) moles. - Individuals with a family history of melanoma. - Those with a weakened immune system or a history of other skin cancers. - People who use tanning beds or have significant sun exposure.
3	How can I recognize a high-risk mole?	To recognize a high-risk mole that might indicate melanoma, you can use the ABCDE rule, which helps identify suspicious features in moles: ABCDE Rule: A – Asymmetry: One half of the mole doesn't match the other half in shape, color, or thickness. B – Border: The edges of the mole are irregular, ragged, notched, or blurred, rather than smooth. C – Color: The mole has multiple colors or shades (brown, black, red, white, blue, or gray) or an uneven distribution of color. D – Diameter: The mole is larger than 6mm (about the size of a pencil eraser), although melanomas can be smaller. E – Evolving: The mole changes over time in size, shape, color, or texture, or starts to itch, bleed, or become raised. Additional Warning Signs: The "Ugly Duckling" Sign: A mole that looks different from all the other moles on your body. If one stands out, it should be checked. New Moles in Adulthood: Most normal moles appear in childhood or adolescence. A new mole appearing after age 30 should be evaluated. Itching, tenderness, or pain in a mole. Bleeding, oozing, or crusting of a mole. Raised or elevated texture when the mole was previously flat. If you notice any of these signs or any change in a mole, it's crucial to consult a dermatologist as soon as possible for a professional evaluation. Early detection is key in treating melanoma effectively.

4	Is melanoma hereditary?	Yes, melanoma can be hereditary. Having a first-degree relative (parent, sibling, or child) with melanoma increases your risk. About 10% of people with melanoma have a family history of the disease, and certain genetic mutations, such as those in the CDKN2A and CDK4 genes, can increase susceptibility.
5	What does melanoma in situ mean?	Melanoma *in situ* is an early stage of melanoma where the cancer cells are confined to the top layer of the skin (epidermis). It has not spread to deeper layers or other parts of the body, making it highly treatable if removed promptly.
6	What are the best treatments for melanoma?	Treatment depends on the stage and location but often includes: - Surgical removal for early-stage melanoma. - Immunotherapy, targeted therapy, chemotherapy, or radiation for advanced stages. - Sentinel lymph node biopsy may be used to check if cancer has spread.
7	Do tattoos increase the risk of melanoma?	Tattoos do not directly increase melanoma risk, but they can make it harder to spot changes in moles or new growths. It's important to monitor skin changes even if you have tattoos.
8	I accidentally got hit on a mole, now it's swollen and red. Can I get melanoma?	Trauma to a mole does not cause melanoma, but if a mole changes in size, shape, or color, or if it doesn't heal, you should have it checked by a dermatologist, as these can be signs of skin cancer.
9	I have a small blue mole on the top of my foot, could it be dangerous?	A blue mole could be a benign blue nevus, but since melanoma can present in various colors (including blue), it's advisable to have it examined by a dermatologist, especially if it's changing in appearance.
10	Is there a type of diet that helps prevent melanoma?	While no specific diet can prevent melanoma, a balanced diet rich in antioxidants (found in fruits, vegetables, nuts, and seeds) may help protect skin from damage. Foods high in vitamins C, D, E, selenium, and omega-3 fatty acids are beneficial for skin health.
11	If I use SPF50+ protection, can I expose myself to the sun's rays even when the UV index is very high without increasing my risk of developing skin cancer?	SPF50+ sunscreen reduces UV exposure but doesn't completely eliminate the risk. When the UV index is very high, it's best to seek shade, wear protective clothing, and avoid prolonged exposure, even with sunscreen.

12	In which case do you recommend taking a genetic test to see if I am predisposed to developing melanoma?	A genetic test might be recommended if: - You have a strong family history of melanoma. - Multiple family members have had melanoma or other cancers. - You've had multiple melanomas or unusual moles yourself. Consult a genetic counselor to discuss testing options.
13	I have had a raised mole for a long time, recently it has slightly changed color and a small superficial spot has formed underneath, should I be worried?	Any change in a mole's appearance (color, size, shape, or texture) should be evaluated by a dermatologist. Changes can be early signs of melanoma, and early detection is crucial.
14	What are the best practices to prevent melanoma?	- Use broad-spectrum sunscreen (SPF 30+ or higher) daily. - Wear protective clothing, hats, and sunglasses. - Avoid tanning beds and seek shade, especially between 10 a.m. and 4 p.m. - Perform regular self-skin checks and get annual dermatologist exams. - Be vigilant about changes in moles or skin lesions.
15	How often should I check my moles?	You should perform a self-examination of your moles once a month to monitor any changes or new growths. Regular checks help you become familiar with your skin's patterns, making it easier to spot any changes. In addition to monthly self-checks, it's advisable to have a professional skin examination by a dermatologist once a year, or more frequently if you have risk factors such as a family history of melanoma, a large number of moles, or a history of severe sunburns.
16	What is mole mapping?	Mole mapping (or digital dermatoscopy) is a technique used by dermatologists to: - Take detailed photographs of the entire skin surface to document all moles and skin lesions. - Monitor changes in size, shape, or color of moles over time by comparing images from previous sessions. - Detect new moles that may appear in between visits. Mole mapping is especially beneficial for individuals with a high number of moles, atypical moles, or a family/personal history of skin cancer. It aids in early detection by identifying even subtle changes in moles, which might be harder to spot during a standard visual exam.

17	What is the difference between epiluminescence and mole checking? Which one do you recommend?	Epiluminescence: Also known as dermoscopy or dermatoscopy, this is a non-invasive technique where a dermatologist uses a handheld device called a dermatoscope. It provides a magnified and illuminated view of moles and skin lesions, allowing for a detailed examination of structures beneath the skin's surface that aren't visible to the naked eye. This method helps differentiate between benign and potentially malignant moles. Mole Checking: Refers to the general process of examining moles, either through self-examinations, dermatologist visual inspections, or using tools like a dermatoscope. It may or may not involve advanced imaging techniques. Recommendation: If you are at high risk (many moles, atypical moles, family history of melanoma, etc.), a combination of mole mapping and epiluminescence is most effective. Mole mapping provides a comprehensive overview and helps track changes over time, while dermoscopy offers an in-depth examination of individual moles. For routine self-checks, carefully observing your moles using the ABCDE rule is a good practice, but an annual visit to a dermatologist who can perform dermoscopy is highly recommended for thorough monitoring.
18	Can confocal dermoscopy be used on all moles on the body?	Confocal dermoscopy (reflectance confocal microscopy) can be used on many moles but may not be practical for all, especially in hard-to-reach areas or on very thick moles. It's primarily used for more detailed examination of suspicious lesions.
19	Do you think it is useful to have a screening in primary schools for the prevention of melanoma?	Screening in primary schools can be useful for early education about sun safety and skin cancer awareness. However, widespread screening for melanoma in children is not common since it's rare at that age. Teaching sun protection habits is more beneficial for long-term prevention.
20	If hair grows in a mole, can I be confident that it is benign?	The presence of hair growing in a mole is generally a good sign and often suggests that the mole is benign. Hair growth indicates that hair follicles are intact and functioning, which usually means the mole is not disrupting the deeper skin layers where hair follicles are located. However, it's important to note that not all benign moles have hair, and not all hairless moles are dangerous. Additionally, having hair in a mole does not guarantee that it's benign. There are rare cases where melanoma can occur in a mole that has hair growth. When to Be Concerned: If the mole changes in appearance (size, shape, or color). If the hair suddenly stops growing. If the mole becomes itchy, painful, or starts bleeding. If you notice other signs like the mole becoming asymmetrical, developing irregular borders, or having multiple colors. In these cases, it's best to have the mole evaluated by a dermatologist, even if hair is present. Regular self-examinations and professional skin checks remain crucial for early detection of any skin abnormalities.