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Harold C. Simmons Cancer Center

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# What you should know about Hereditary Melanoma

Most melanoma is not inherited; only 10% of all melanomas are thought to be hereditary. Some cases of hereditary melanomas (approximately 20-57%) are associated with a mutation in the *CDKN2* gene (also called p16). 72-81% of families with hereditary melanomas and pancreatic cancer will have a *CDKN2* mutation that can be identified. Other as yet unidentified genes account for other hereditary melanoma cases.

## The risk for cancer associated with *CDKN2* mutations

- Mutations in the *CDKN2* gene are associated with up to a 76% risk for melanoma by age 80.
- Individuals with a *CDKN2* mutation who have had melanoma have an increased risk for developing a second melanoma.
- *CDKN2* mutations are also associated with an increased risk (up to 17% by age 75) for pancreatic cancer in some families.

## The risks to family members

*CDKN2* mutations are inherited in an autosomal dominant fashion. The children, brothers, sisters, and parents of individuals with *CDKN2* mutations have a 50% (1 in 2) risk to have the mutation. Individuals with a *CDKN2* mutation may develop one cancer, more than one cancer, or none at all.

## Managing the risk

***Increased Surveillance***

- Regular self-examinations of the skin
- Clinical skin examinations every 6-12 months, beginning in childhood
- Baseline photography of the entire body by a dermatologist

***Preventative surgery***

- Biopsy and/or removal of suspicious moles

***Lifestyle modifications***

- Limit sun exposure and avoid tanning beds
- Wear protective clothing
- Apply sunscreen with SPF of 15 or higher at regular intervals
- Avoid smoking, as smoking significantly increases the risk for pancreatic cancer in individuals with *CDKN2* mutations.