

- Merkel cell carcinoma is an aggressive neuroendocrine carcinoma of the skin whose pathogenesis is multifactorial and related to ultraviolet radiation exposure, immunosuppression, and Merkel cell polyomavirus.
- The Hedgehog (Hh) signaling pathway plays a role in the development and persistence of human cancers including the tumorigenesis of nevoid basal cell carcinoma syndrome.
- Suppressor of fused (SUFU) is an intracellular negative regulator of the Hh signaling pathway which functions as a tumor suppressor protein by modulating the activity of glioma transcription factor.
- SUFU mutation (R299G) was discovered in a metastatic Merkel cell carcinoma, representing the first Merkel cell carcinoma related to an alteration in the Hedgehog signaling pathway.
- Therapies that target the Hedgehog signaling pathway downstream of SUFU may be appropriate for individuals whose cancer harbors a SUFU mutation.

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