



Subject: Pathology Bloom's level: 2 (Comprehension) Specimen: schwannoma tissue **Q:** In a histological examination, an H&E-stained image shows Verocay bodies and cystic degeneration with pseudoepithelial metaplasia, indicative of schwannoma. How does the risk of malignant transformation in schwannoma compare to other peripheral nerve sheath tumors?

A) Schwannomas exhibit a lower risk of malignant transformation compared to other peripheral nerve sheath tumors.

- B) Schwannomas and neurofibromas have similar risks of malignant transformation.
- C) The risk of malignant transformation in schwannomas is dependent on specific genetic factors.
- D) Schwannomas have an increased risk of malignancy in the presence of multiple tumors.
- E) Schwannomas rarely undergo malignant transformation, regardless of tumor location or size. X

VLM Answer: Let me think about this step by step:

- 1) The images show typical histological features of schwannoma with:
- Verocay bodies (palisading nuclei)
- Cystic degeneration
- Pseudoepithelial metaplasia
- 2) Regarding malignant transformation in schwannomas:
- Schwannomas are typically benign tumors
- They rarely undergo malignant transformation
- This is true regardless of their size or location
- Even multiple schwannomas (as in schwannomatosis) rarely become malignant
- 3) Comparing to other peripheral nerve sheath tumors:
- Neurofibromas, especially plexiform types, have a higher risk of malignant transformation
- This is particularly true in the setting of NF1 (neurofibromatosis type 1)
- Malignant peripheral nerve sheath tumors (MPNSTs) more commonly arise from neurofibromas than schwannomas
- 4) The statement about genetic factors or increased risk with multiple tumors isn't accurate for schwannomas, though it may be true for other nerve sheath tumors
- 5) Looking at the options, the key is that schwannomas maintain their benign nature in most cases, regardless of circumstances.

The answer is (5)

Error type: Overgeneralization

Error reason: The selected choice does not address the question asked "compared to other peripheral nerve sheath tumors?". The "best answer" for the question should compare to other tumors as specified in the question. The AI has "oversimplified" the question to ask a simpler question than the one asked.