

# Primary small cell neuroendocrine carcinoma of the breast: The histogenetic diatribe

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We read with interest the article entitled "Primary small cell neuroendocrine carcinoma of the breast: a report of two cases and review of the literature" by Spinelli et al. [1]. The authors stated that "the histogenesis is still unclear because the presence of neuroendocrine cells in normal breast has not been proved conclusively". Moreover they reported two histogenetic hypotheses, the first one stating that "small cell neuroendocrine carcinoma (SCNC) is a variant of metaplastic carcinoma arising from a lobular or ductal carcinoma", the second one claiming that "it is a distinct type of breast carcinoma different from the usual type". We appreciate this case report and we agree with the authors on the histogenetic diatribe of this rare type of breast neoplasia. In this background, we would highlight our previous case report about a solid variant of mammary adenoid cystic carcinoma merging with "small cell carcinoma" [2] in which we found positivity for CD10 and S100 and negativity for estrogen receptors, both in sbACC and in SCC, in keeping with a myoepithelial origin of both neoplastic areas [3] supporting the hypothesis that the "two components share the same histogenetic myoepithelial origin and represent an example of dedifferentiation along neuroendocrine phenotype lines occurring in a multipotential neoplastic stem line, already committed towards a myoepithelial phenotype". These findings are in keeping with the first hypothesis about the metaplastic, divergent histogenetic nature of SNSC and we think that this rare SNSC, albeit arising from a different tumor, could be introduced in this case review of the literature, also for its contribute to the histogenetic diatribe.

## References

[1] Spinelli C, Fregoli L, Biricotti M, Pucci V, Grosso M, et al. (2013) Primary small cell neuroendocrine carcinoma of the breast: a report of two cases and review of the literature. J Cancer Res Ther 1:186-193.

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[3] Kesse-Adu R, Shousha S (2004) Myoepithelial markers are expressed in at least 29% of oestrogen receptor negative invasive breast carcinoma. Mod Pathol 17:646-652.

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