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LETTER TO THE EDITOR

Emerging Role of Geminin as a Prognostic Marker in Systemic Malignancies

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To the Editor:

I read with great interest the recent article by Bonito et al. [1] in a recent issue of your esteemed journal. The article is highly thought provoking. Geminin is rapidly emerging as a significant marker and prognostic indicator in a number of systemic malignancies besides breast malignancies.

A worse clinical outcome and correspondingly a lower relapse-free survival rate are seen in salivary gland carcinomas that express higher levels of geminin. The labeling index for salivary duct carcinomas is about 15.2% and associated with worse prognosis in comparison to acinic cell carcinomas which have a labeling index of 1.6% [2]. The mean labeling index for oral squamous cell carcinomas is 21.3% in comparison to 9.2% in oral dysplasia, thus making geminin a useful biomarker for malignant oral tumors [3]. A worse prognosis is seen in stage I-IV "intestinal type" gastric carcinomas which exhibit a higher geminin labeling index in comparison to those with lower geminin labeling indices [4]. A worse clinical prognosis is also seen in colorectal carcinomas which exhibit higher MCM7 and Ki-67 labeling indices in co-junction with a higher geminin labeling index [5].

Accentuated expression of geminin is seen in mammary tumors [6]. Not surprisingly, higher levels are associated with a poor clinical outcome in these tumors [7]. Geminin expression is altered in cervical carcinomas also and significantly affects cancer prognosis in addition to other markers such as CDC6 [8]. Interestingly, high grade astrocytomas with lower germinin labeling indices are associated with a worse prognosis in comparison to astrocytomas with a higher labeling index [9].

Clearly, geminin has a major role to play in systemic carcinogenesis and can serve as a significant marker of malignancy and disease prognosis in systemic tumors.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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