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Increased expression of endonuclease G in gastric and colorectal carcinomas

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ABSTRACT

Aims. Endonuclease G (EndoG) is a mitochondrial protein that plays a role in DNA fragmentation during apoptosis. In addition, EndoG plays a role in cell proliferation and survival. It may be important to identify EndoG protein expression to predict its function in human cancers. The aim of this study was to explore whether alteration of EndoG expression might be a characteristic of colorectal or gastric carcinoma.

Methods. We investigated EndoG protein expression in 103 colorectal and 60 gastric carcinoma tissues by immunohistochemistry using a tissue microarray approach.

Results. Expression of EndoG was detected in 72 (70%) of the colorectal carcinomas and 41 (68%) of the gastric carcinomas in cytoplasm. By contrast, normal mucosal cells of both stomach and colon tissues showed no or very weak expression of EndoG. There was no significant association of EndoG expression with clinocopathological characteristics, including invasion, metastasis and stage.

Conclusion. Our data indicate that EndoG inactivation by loss of expression may not occur in colorectal and gastric cancers. Rather, increased expression of EndoG in colorectal and gastric cancer cells compared to their normal mucosal epithelial counterparts suggests that neo-expression of EndoG may play a role in both colorectal and gastric tumorigenesis.

Key words: *EndoG expression, apoptosis, gastric cancer, colon cancer.*

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