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# 4EBP1 EXPRESSION IN COLORECTAL ADENOMAS: RELATIONSHIP TO DYSPLASIA AND STEM CELL PHENOTYPE PROTEIN CD133

Adriana Handra-Luca, Mouna Bendib
APHP Université Paris Nord, UFR SMBH Bobigny, France

## Abstract

4EBP1 (4E-binding-protein 1) along with 4EBP2 are small proteins that may interfere with translation and with a reversion of a transformed phenotype.
Methods
Phosphorylated p4EBP1 expression was studied by immunohistochemistry in colorectal adenomas on tissue microarrays. The expression patterns (cytoplasmic, present/absent) were analyzed with regard to the main morphological features and to CD133, mTOR and PTEN data (Medcalc, rank correlation tests).
Results
Nuclear and cytoplasmic p4EBP1 were correlated (Kendall p<0.01/tau=0.657). Nuclear p4EBP correlated with decreased adenoma size (Kendall p=0.01/ tau=-0.216), low grade dysplasia (Kendall p<0.01/tau=-0.258) as well as with nuclear PTEN (Kendall p<0.01/tau=0.369) and, membrane mTOR (Kendall p<0.01/tau=0.273). When considering global expression (nuclear or cytoplasmic) p4EBP1 correlated, besides to low grade dysplasia (Kendall p=0.04/tau=-0.179) to the extent of mucosecretion (Kendall p=0.02/tau=0.206) and to global (cytoplasmic or membrane) CD133 (Kendall p=0.05/tau=0.196).
Conclusion
The results of our study suggest for the 4EBP1 protein an interference with initial steps of adenomagenesis since correlated decreased tumor size, low grade dysplasia, increased mucosecretion as well as to the stem cell phenotype protein CD133.

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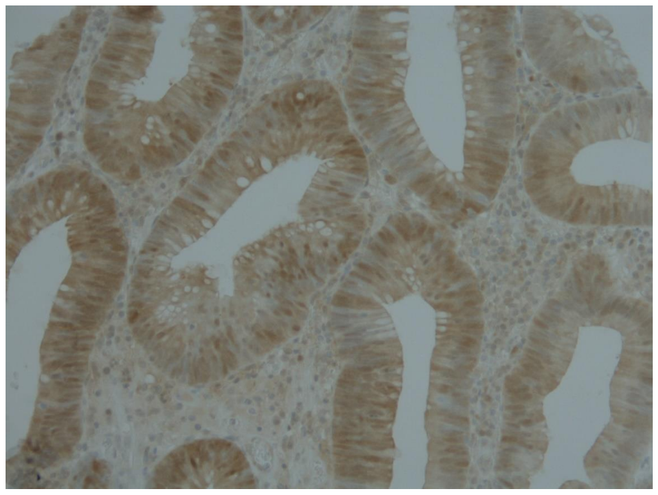

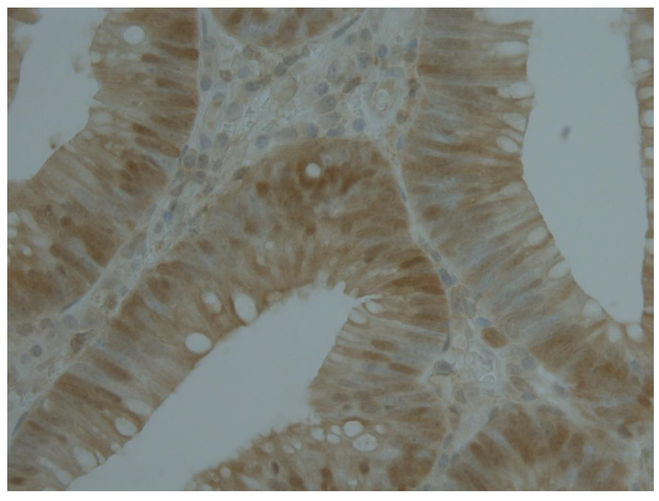

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