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Autor(en) des Beitrags:
Schellnegger, Raphael; Quante, Anne; Rospieszc, Susanne; Schernhammer, Martina; Höhl, Bettina; Tobiasch, Moritz; Pastula, Agnieszka; Brandtner, Anna; Abrams, Julian A; Strauch, Konstantin; Schmid, Roland M; Vieth, Michael; Wang, Timothy C; Quante, Michael

Titel des Beitrags:
Goblet Cell Ratio in Combination with Differentiation and Stem Cell Markers in Barrett Esophagus Allow Distinction of Patients with and without Esophageal Adenocarcinoma.

Abstract:
The increasing incidence of esophageal adenocarcinoma (EAC) is mirrored by the increasing prevalence of Barrett esophagus, a precursor lesion resulting in a large number of individuals “at risk” for this lethal malignancy. Among patients with Barrett esophagus, only about 0.3% annually will develop EAC. Because large numbers of patients are followed in endoscopic surveillance, there is a need for risk prediction among a growing population of patients with Barrett esophagus. We identified four potential biomarkers from an inflammation (IL1?)-dependent mouse model of Barrett esophagus and tested them in 189 patients with Barrett esophagus with and without high-grade dysplasia (HGD)/early cancer (T1). The primary goal was to distinguish patients with Barrett esophagus with no evidence of dysplasia from those with dysplasia. Increasing stem cell marker LGR5 and niche cell marker DCLK1 and decreasing differentiation marker (secretory mucus cells, TFF2 cells) correlated with elevated tumor score in the mouse. Having outlined the origin of those markers in the Barrett esophagus mouse model, we showed the applicability for human Barrett
esophagus. We compared 94 patients with nondysplastic Barrett esophagus tissue with 95 patients with Barrett esophagus and HGD or early cancer. Low levels of TFF2 (AUC 87.2%) provided the best discrimination between nondysplastic Barrett esophagus and Barrett esophagus with cancer, followed by high levels of DCLK1 (AUC 83.4%), low goblet cell ratio (AUC 79.4%), and high LGR5 (AUC 71.4%). The goblet cell ratio, rather than the presence of goblet cells per se, was found to be an important discriminator. These findings may be useful in developing future risk prediction models for patients with Barrett esophagus and ultimately to improve EAC surveillance. Cancer Prev Res; 10(1); 55-66. ©2016 AACR.