Fakultät für Medizin

Dokumenttyp: journal article

Autor(en) des Beitrags: Elsner, M; Rauser, S; Maier, S; Schöne, C; Balluff, B; Meding, S; Jung, G; Nipp, M; Sarioglu, H; Maccarrone, G; Aichler, M; Feuchtinger, A; Langer, R; Jütting, U; Feith, M; Küster, B; Ueffing, M; Zitzelsberger, H; Höfler, H; Walch, A

Titel des Beitrags: MALDI imaging mass spectrometry reveals COX7A2, TAGLN2 and S100-A10 as novel prognostic markers in Barrett's adenocarcinoma.

Abstract: To characterize proteomic changes found in Barrett's adenocarcinoma and its premalignant stages, the proteomic profiles of histologically defined precursor and invasive carcinoma lesions were analyzed by MALDI imaging MS. For a primary proteomic screening, a discovery cohort of 38 fresh frozen Barrett's adenocarcinoma patient tissue samples was used. The goal was to find proteins that might be used as markers for monitoring cancer development as well as for predicting regional lymph node metastasis and disease outcome. Using mass spectrometry for protein identification and validating the results by immunohistochemistry on an independent validation set, we could identify two of 60 differentially expressed m/z species between Barrett's adenocarcinoma and the precursor lesion: COX7A2 and S100-A10. Furthermore, among 22 m/z species that are differentially expressed in Barrett's adenocarcinoma cases with and without regional lymph node metastasis, one was identified as TAGLN2. In the validation set, we found a correlation of the expression levels of COX7A2 and TAGLN2 with a poor prognosis while S100-A10 was confirmed by multivariate analysis as a novel independent prognostic factor.
in Barrett's adenocarcinoma. Our results underscore the high potential of MALDI imaging for revealing new biologically significant molecular details from cancer tissues which might have potential for clinical application. This article is part of a Special Issue entitled: Translational Proteomics.

Zeitschriftentitel / Abkürzung:
J Proteomics

Jahr:
2012

Band:
75

Heft / Issue:
15

Seiten:
4693-704

Sprache:
eng

Pubmed:

Print-ISSN:
1874-3919

TUM Einrichtung:
Chirurgische Klinik und Poliklinik; r Allgemeine Pathologie und pathologische Anatomie

Occurences:
- Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Chirurgische Klinik und Poliklinik > 2012
- Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Institut für Allgemeine Pathologie und Pathologische Anatomie > 2012

entries: