

Tilmelding af Foredrag

Foredragets titel

Photoplethysmography for demarcation of cutaneous squamous cell carcinoma

Forfatter(e)

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Uddannelsesniveau

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Introduktion

A video processing algorithm designed to identify cancer suspicious skin areas is presented here. It is based on video recordings of squamous cell carcinoma in the skin. Squamous cell carcinoma is a common malignancy, normally treated by surgical removal. The surgeon should always balance sufficient tissue removal against unnecessary mutilation, and therefore methods for distinction of cancer boundaries are wanted. Squamous cell carcinoma has angiogenesis and increased blood supply. Remote photoplethysmography is an evolving technique for analysis of signal variations in video recordings in order to extract vital signs such as pulsation. We hypothesize that the remote photoplethysmography signal inside the area of a squamous cell carcinoma is significantly different from the surrounding healthy skin.

Materiale/metode

Based on high speed video recordings of 13 patients with squamous cell carcinoma, we have examined temporal signal differences in cancer areas versus healthy skin areas.

Resultater

A significant difference in temporal signal changes between cancer areas and healthy areas was found.

Diskussion

Our video processing algorithm showed promising results encouraging further investigation to clarify how detailed distinctions can be made.

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