



## Non-Albicans Candida in Oral Cancer

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Mouth is an important source of infections and oral infections increase the risk of mortality [1]. Invasive *Candida* infections (ICI) are associated with high mortality and non-*albicans Candida* are responsible for most of such cases [2]. *Candida* may even play a role in the development of cancer [3]. In a recent large follow up study from Denmark two times increased risk of cancers was found in mouth, tongue, oropharynx and esophagus in subjects with *Candida* infections [4].

Yeasts are opportunistic pathogens and systemic yeast infections are fatal particularly in frail patients [5]. Oral cancer patient's immune defenses are often impaired emphasizing the risk for systemic infections in this patient group. Previous studies have shown that non-*albicans Candida* such as *C. glabrata* indeed produce carcinogenic amounts of acetaldehyde that may lead to development of oral cancer [6].

There are seven *Candida* species of major medical importance; *C. albicans*, *C. tropicalis* and *C. glabrata* are frequently isolated from medical specimens while the other pathogenic *Candida* species are *C. parapsilosis*, *C. stellatoidea*, *C. guilliermondii*, *C. krusei*, and *C. pseudotropicalis* [7]. There is shift in distribution of *Candida* species regarding patients with cancer and candidemia, from *C. albicans* to the non-*albicans* species such as *C. glabrata*, *C. tropicalis*, *C. krusei* and *C. parapsilosis* [8]. Hence, identification and treatment of the non-*albicans Candida* strains has become more important than previously.

Our knowledge is sparse of the effect of non-*albicans Candida* on patients with oral cancer. The research is thus expected to cast new light in the area and particularly provide new means for diagnosis and treatment protocols. We anticipate that research in the area then directly benefit the patients. The ultimate goal is to find means for better diagnosis and treatment of oral cancer patients.

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