鑑定口腔癌血液外泌體微小 RNA 特徵

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在台灣和東南亞的周邊國家，口腔癌的發病率特別高。主要原因當然是勞動密集型的男工流行咀嚼檳榔的習慣。在這些工人中，它被用作保持注意力和精力的興奮劑，以對抗疲勞。檳榔含有多酚類化學物質，在鹼性條件下產生自由基，並被證明具有誘變和基因毒性作用。其他已知的習慣性風險因素是吸煙和飲酒。通過多年的公共宣傳，台灣的檳榔使用已大大減少，但在一些勞動者中仍然存在。香煙的使用也在減少，但被電子煙所取代，特別是在年輕人群中。電子煙對口腔癌發生的影響還有待研究。

口腔癌的另一個致癌風險因素是人類乳頭瘤病毒的感染。眾所周知，高危的乳頭瘤病毒會導致粘膜上皮細胞的轉化，是宮頸癌的主要原因。它通過密切和經常的性接觸傳播。在台灣，約 30%的口腔癌為乳頭瘤病毒感染陽性。新發現的口腔癌患者數量在 2014 年達到高峰，此後保持穩定。然而，最新的癌症登記報告中的統計分析顯示，2018 年仍有超過 8100 名口腔癌患者首次被診斷，並且幾乎所有新診斷的患者都是男性。口腔癌年齡正常化的發病率為每 10 萬名男性 39.22 人，使口腔癌成為男性患者中第四大常見的癌症。

表明大多數口腔癌患者只接受了常規治療，而沒有接受最近開發的癌症治療。然而，2018 年有超過 2700 人死亡，使口腔癌在男性患者的癌症致死率中排名第四。因此，口腔癌的治療療效亟待提高。此外，大多數患者的年齡段在 40 至 60 歲之間。因此，口腔癌給患者及其家庭帶來了巨大的社會負擔，因為大多數患者仍處於工作的黃金年齡。因此，迫切需要改善整體治療效果，或更好地檢測癌前病變或口腔癌的早期階段。

Identifying the blood exosomal microRNA signature of oral cancer

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The incidence of oral cancer is specifically high in Taiwan and surrounding countries of Southeast Asia. The main cause is certainly the popular habit of betel nut chewing in labor-intensive male workers . It is used as a stimulant to maintain focus and energy to combat fatigue among these workers. Betel nut contains polyphenolic chemicals that produces free radicals under alkaline condition and is demonstrated to exhibit mutagenic and genotoxic effects . Other known habitual risk factors are smoking and alcohol consumption . Through years of public campaign, the use of betel nut in Taiwan has been greatly reduced but still remains in some labor workers . Cigarette use is reduced as well but is replaced by electronic cigarette, especially in the young population. The impact of electronic cigarette to the occurrence of oral cancer remains to be investigated.

Another carcinogenic risk factor of oral cancer is infection of human papillomavirus . The high-risk papillomavirus is known to cause transformation of mucosa epithelium and is the main cause of cervical cancer. It is transmitted through close and often sexual contact. In Taiwan, about 30% of oral cancer is positive for papillomavirus infection . The number of newly identified oral cancer patients peaked at 2014 and remains stable since then. However, the statistical analysis in the latest Cancer Registry Report shows that there were still over 8,100 oral cancer patients first diagnosed in 2018, and nearly all of newly-diagnosed patients are male. The age-normalized incidence rate is 39.22 per 100,000 man, making oral cancer the fourth most common cancer in male patients .

However, there was more than 2,700 mortality in 2018, making oral cancer the fourth in cancer-caused mortality among male patients.

Hence, the treatment efficacy for oral cancer is in urgent need for improvement. In addition, the majority of patients are in the age groups between 40 and 60 . Hence, there is an urgent necessity to improve overall treatment outcome or to better detect the precancerous lesions or early stage of oral cancer.