

## The Latest Research In The Battle Against Oral Cancer

The Mouth Cancer Action Month campaign – which was launched by the British Dental Health Foundation and supported by the Association of Dental Groups – may have finished for another year, but there is no doubt that the fight against mouth cancer must go on. Much has been learnt about the disease over recent years, especially in regards to triggers and causes, but over the last year in particular, new research has come to light.

One study expected to be printed in December 2015, for instance, suggests that there could be a complex network of chemical, viral and (epi)genetic factors that link to the occurrence of oral carcinogenesis.<sup>i</sup> While the factors that trigger this process and the metastasis of oral cancer have not been clarified in this study, the mere suggestion that immune reactions following viral infections may cross-react with tumour suppressor action proteins to create oral cancer could be ground breaking.

Another element that is currently being researched at some length could be crucial to diagnosis, is the mutation of the TP53 gene. Normally, the protein produced by this gene – known as p53 – works to prevent cells from increasing in size. But as studies of the gene show, changes can cause oral squamous cell carcinoma to develop<sup>ii</sup> – which accounts for more than 90% of oral cancers.<sup>iii</sup> Testing for changes to p53 could serve as a prognostic marker, thereby increasing the chances of early detection.

In terms of effective diagnosis, it has also been suggested in research conducted earlier this year, that salivary genomic and proteomic biomarkers could potentially be a successful – and less invasive – approach to testing for oral cancer.<sup>iv</sup> This could prove very beneficial to diagnosis if this were to develop. In the meantime, it is crucial that you continue to screen for oral cancer and invite your patients for regular check-ups.

What still needs to be done, however, is to convince the government that oral cancer is as important as other healthcare issues. That's not to say that ministers don't care about oral cancer – for Sir Paul Beresford MP seemed sincerely passionate about the matter at the Mouth Cancer Action Month launch – but it occasionally appears as if other concerns, such as smoking and obesity, take precedence.

It goes without saying that you are all aware of mouth cancer and the health risks that late diagnosis poses. But by keeping up to date with the latest research, maintaining constant vigilance with screenings and treatment pathways and by urging government officials to take greater action, you can keep on top of oral cancer. To find out more, please contact the ADG or British Dental Health Foundation.

To donate or for more information visit [www.dentalgroups.co.uk](http://www.dentalgroups.co.uk) or [www.dentalhealth.org](http://www.dentalhealth.org)

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<sup>i</sup> Lucchese A. Viruses and Oral Cancer: Crossreactivity as a Potential Link. *Anticancer Agents Med Chem.* 2015; 15(10): 1224-9. Accessed online November 2015

<http://www.ncbi.nlm.nih.gov/pubmed/26179264>

<sup>ii</sup> Khan H, Gupta S, Husain N, Misra S, Negi MPS, Jamal N, Ghatak A. Correlation between expressions of Cyclin-D1, EGFR and p53 with chemoradiation response in patients of locally advanced oral squamous cell carcinoma. Volume 3, June 2015, Pages 11-17. Accessed online November 2015

<http://www.sciencedirect.com/science/article/pii/S2214647414000300>

<sup>iii</sup> Markopoulos AK, Michailidou EZ, Tzimagiorgis G. Salivary markers for oral cancer detection. *Open Dent J* 2010;4:172-8.

<sup>iv</sup> Bano S, David MP, Indira AP. Salivary Biomarkers for Oral Squamous Cell Carcinoma: An Overview. Vol 1, Issue 8, January 2015. Accessed online November 2015 [http://www.ijsscr.com/sites/default/files/articles/IJSS-CR\\_1\(8\)\\_RA02.pdf](http://www.ijsscr.com/sites/default/files/articles/IJSS-CR_1(8)_RA02.pdf)