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## Prognostic value of immunoexpression of CCR4, CCR5, CCR7 and CXCR4 in squamous cell carcinoma of tongue and floor of the mouth

**Catherine-Bueno Domingueti**<sup>1,2</sup>, **João-Baptista-Macuco Janini**<sup>3</sup>, **Livia-Máris-Ribeiro Paranaíba**<sup>2</sup>, **Carlo Lozano-Burgos**<sup>4</sup>, **Pablo Olivero**<sup>5,6</sup>, **Wilfredo-Alejandro González-Arriagada**<sup>5,7</sup>

<sup>1</sup> University José do Rosário Vellano, Biomedicina of Varginha, Brazil

<sup>2</sup> Postgraduate Program in Biological Sciences, Federal University of Alfenas, Brazil

<sup>3</sup> Institute of Diagnostic and Prevention (IPD Laboratory), Varginha, Brazil

<sup>4</sup> Hospital Carlos Van Buren, Valparaíso, Chile

<sup>5</sup> Centro de Investigación Interoperativo en Ciencias Odontológicas y Médicas (CICOM), Universidad de Valparaíso, Valparaíso, Chile

<sup>6</sup> Facultad de Medicina, Universidad de Valparaíso, Valparaíso, Chile

<sup>7</sup> Patología y Diagnóstico Oral, Facultad de Odontología, Universidad de Valparaíso, Valparaíso, Chile

### Correspondence:

Facultad de Odontología  
Universidad de Valparaíso  
Subida Leopoldo Carvallo 211  
Playa Ancha, Valparaíso, Chile  
[wilfredo.gonzalez@uv.cl](mailto:wilfredo.gonzalez@uv.cl)

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### Abstract

**Background:** Diverse studies have evidenced that chemokines can play a critical role in pathogenesis of oral squamous cell carcinoma (SCC). The main chemokines involved in oral carcinogenesis, tumor invasion and metastasis are CCR4, CCR5, CCR7 and CXCR4, and our aim was to evaluate the prognostic value of the immunoexpression of these chemokines in SCC of tongue and floor of the mouth.

**Material and Methods:** A retrospective descriptive study of the immunohistochemical expression of CCR4, CCR5, CCR7 and CXCR4 in paraffin-embedded samples of 124 patients with SCC of the tongue and floor of the mouth was performed, considering 98 cases from Brazil and 26 cases from Chile. Associations between variables were analyzed using chi-square test. Survival curves were performed using the Kaplan-Meier method and compared with long-rank test. For multivariate survival analysis, the Cox hazard model was established. The level of significance established was  $p \leq 0.05$ .

**Results:** The statistical analysis showed that samples with well or moderate WHO model differentiation ( $p=0.001$ ) and a high expression of CCR5 ( $p=0.05$ ) were significantly associated with a higher disease specific survival, which were also observed in Cox's multivariate analysis ( $p=0.01$ ). A higher expression of CCR7 ( $p=0.01$ ) interfered significantly in disease-free survival in univariate analysis and in Cox's multivariate analysis ( $p=0.05$ ).