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EDITED BY
Weiren Luo,
The Second Affiliated Hospital of Southern
University of Science and Technology,
China

REVIEWED BY
Lorenzo Lo Muzio,
University of Foggia,
Italy
Alfredo Budillon,
C. Pascale National Cancer Institute
Foundation (IRCCS),
Italy

*CORRESPONDENCE
Roberto Bei
✉ bei@med.uniroma2.it

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Recent findings on the impact of ErbB receptors status on prognosis and therapy of head and neck squamous cell carcinoma

Camilla Palumbo¹, Monica Benvenuto^{1,2}, Chiara Focaccetti³,
Loredana Albonici⁴, Loredana Cifaldi^{1,3}, Alessandra Rufini^{2,4},
Daniela Nardoni⁵, Valentina Angiolini⁵, Arianna Bei⁶, Laura Masuelli³
and Roberto Bei^{7*}

¹Department of Clinical Sciences and Translational Medicine, University of Rome "Tor Vergata", Rome, Italy, ²Saint Camillus International University of Health and Medical Sciences, Rome, Italy, ³Academic Department of Pediatrics (DPUO), Ospedale Pediatrico Bambino Gesù, Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Rome, Italy, ⁴Department of Biomedicine and Prevention, University of Rome "Tor Vergata", Rome, Italy, ⁵Department of Experimental Medicine, Sapienza University of Rome, Rome, Italy, ⁶Medical School, University of Rome "Tor Vergata", Rome, Italy

Head and neck squamous cell carcinoma (HNSCC) is the sixth most common cancer type, has often an aggressive course and is poorly responsive to current therapeutic approaches, so that 5-year survival rates for patients diagnosed with advanced disease is lower than 50%. The Epidermal Growth Factor Receptor (EGFR) has emerged as an established oncogene in HNSCC. Indeed, although HNSCCs are a heterogeneous group of cancers which differ for histological, molecular and clinical features, EGFR is overexpressed or mutated in a percentage of cases up to about 90%. Moreover, aberrant expression of the other members of the ErbB receptor family, ErbB2, ErbB3 and ErbB4, has also been reported in variable proportions of HNSCCs. Therefore, an increased expression/activity of one or multiple ErbB receptors is found in the vast majority of patients with HNSCC. While aberrant ErbB signaling has long been known to play a critical role in tumor growth, angiogenesis, invasion, metastatization and resistance to therapy, more recent evidence has revealed its impact on other features of cancer cells' biology, such as the ability to evade antitumor immunity. In this paper we will review recent findings on how ErbB receptors expression and activity, including that associated with non-canonical signaling mechanisms, impacts on prognosis and therapy of HNSCC.

KEYWORDS

head and neck squamous cell carcinoma, EGFR, ErbB receptors, Cetuximab, immune checkpoint inhibitors

1. Introduction

Head and neck (HN) cancers include a heterogeneous group of cancers which differ for histological, molecular and clinical features (1–3). More than 90% of HN cancers are squamous cell carcinomas (HNSCCs) arising from the mucosal epithelium of the oral cavity, pharynx and larynx, while much less common HN subtypes originate from the salivary glands, sinuses, muscles or nerves in the head and neck¹ (2–4).

¹ <https://www.cancer.gov/types/head-and-neck/head-neck-fact-sheet#:~:q=hn>

Receptors Recent Findings

Victor M. Corman



Receptors Recent Findings:

Receptors Recent Findings Book Review: Unveiling the Magic of Language

In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has become more apparent than ever. Its ability to stir emotions, provoke thought, and instigate transformation is truly remarkable. This extraordinary book, aptly titled "**Receptors Recent Findings**," written by a very acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound impact on our existence. Throughout this critique, we shall delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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