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Participation of the LINC00174/miR-144-3p/Nrf2 Pathway in Oral Tongue Squamous Cell Carcinoma Cells

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ABSTRACT This study aims to examine how long non-coding ribonucleic acid 00174 (LINC00174) influences micro RNA (miR)-144-3p/nuclear factor erythroid 2-related factor 2 (Nrf2) signalling pathway, as well as its effects on cell proliferation, invasion, apoptosis, and transformation in oral tongue squamous cell cancer. Si-Nrf2, si-LINC00174, miR-144-3p inhibitor, miR-144-3p inhibitor + si-LINC00174, miR-144-3p inhibitor + si-Nrf2, and corresponding control were transfected into SCC-9 cells. The relationships among miR-144-3p, LINC00174, and Nrf2 were established. Reversing the miR-144-3p suppression could restore the diminished migratory, proliferative, and invasive capabilities of SCC-9 cells resulting from the inhibition of LINC00174 and Nrf2. Furthermore, it decreased the levels of Vimentin and Snail expression while enhancing E-cadherin expression level ($P < 0.05$). In conclusion, as for oral tongue squamous cell cancer, LINC00174 at an excessive expression level in SCC-9 cells has the potential to take advantage of the miR-144-3p/Nrf2 signalling pathway to boost the migratory plus invasive capabilities, while inhibiting apoptosis of cells.