

**ABSTRACT**

**Background:** Nasopharyngeal carcinoma (NPC) is a malignancy derived from lymphoepithelial tissue and nasopharyngeal epithelial cells. Response therapy of NPC can be evaluated from histopathological type, but in some patients with same histopathological type illustrated a different response therapy. IL-10 expression expected to predict the better response therapy of NPC. IL-10 expression by immunohistochemical examination associated with the differentiation of tumors.

**Purpose:** To find out the association between IL-10 expression and histopathological type in NPC patients. **Methods:** the study was analytic observational with cross sectional approach. Samples were collected by consecutive sampling. Formalin-fixed paraffin-embedded biopsy specimens were obtained. The expression of IL-10 was studied with immunohistochemistry using *rabbit polyclonal antibody Anti IL-10 ab34843* (Abcam®, Cambridge - UK).

Assessment of the staining was performed by pathologist independent used *Allred* scale. The *Fisher's* exact test was used to determine the correlation expression of IL-10 and histopathological type of nasopharyngeal carcinoma. Statistical significance was defined as  $p < 0.05$ . **Result:** The result of IL-10 expression in NPC patients with histopathological type I WHO NPC obtained 1 sample was strong positive expression and 2 sample was weak positive expression. In patients with histopathological type II WHO NPC obtained 2 samples was strong positive expression and 12 samples was weak positive expression. In patients with histopathological type III WHO NPC obtained 9 samples was strong expression and 7 samples was weak positive expression. From all sample there was 36.36 % was strong positive expression and 63.64% was weak positive expression. There were increase of amount cells that give strong expression on WHO type III. Statistical analysis using *Fisher's* exact test was obtained  $p = 0.040$  with a contingency coefficient 0.384. **Conclusion:** There was moderate association between IL-10 expression and histopathological type in NPC patients.

**Keyword :** Nasopharyngeal carcinoma, expression of CD44 Stem cells cancer, histopathological type.