



## DETECTION OF P63 MARKER IN OVARIAN TUMOURS

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### ABSTRACT

Ovarian cancer is a cancer that begins in an ovary. It results in abnormal cells that have the ability to invade or spread to other parts of the body. The p63 is a homologue gene of the tumor suppressor p53. p63 appears to be important for the development and differentiation of reproductive epithelium and interacts with p53 in human tumorigenesis. This study presents the immunoexpression of the p63 in malignant epithelial ovarian tumors. We evaluated the p63 immunoexpression in 34 ovarian malignant tumors a) using a Polyclonal rabbit antihuman antibody (Biogenex, AM418-5M).

**KEYWORDS:** tumorigenesis and immunoexpression.

### INTRODUCTION

Ovarian cancer is the second most common gynecological malignancy following uterine corpus cancer and is the fifth leading cause of cancer death in women. There are important differences in their incidence across the world. In Europe in 2008, estimated incidence was 66,734 cases with an estimated mortality of 41,929 women. REF.

p63 is a homologue gene of the tumor suppressor p53. p63 appears to be important for the development and differentiation of reproductive epithelium and interacts with p53 in human tumorigenesis.<sup>[1]</sup> It is well known now that p63 plays a key role in epithelial development in various organs, being expressed in myoepithelial cells and in basal cells of stratified epithelia.

In the female genital tract, p63 is expressed in the basal and parabasal cells of mature cervical, vaginal and vulval squamous epithelium and also in cervical reserve cells at the transformation zone and in immature metaplastic and atrophic cervical squamous epithelium.<sup>[2]</sup>

In this study, attention was made to assess the expression of p63 in ovarian cancer among Sudanese patients.

### MATERIALS AND METHODS

34 formalin fixed paraffin embedded tissues were used in this study. From each block 4 um section was cut and subjected to immunostain as described by manufacturer (Biogenex). Polyclonal rabbit antihuman antibody (Biogenex, AM418-5M) for p63 detection was used. Appropriate positive and negative controls were used.

The demographic data of the patients in addition to histopathology results were obtained from lab records.

### RESULTS

Two types of ovarian cancer were included in this study; epithelial-stromal cell tumors type which comprised 73.5% and sex cord-stroma tumors which comprised the remaining 26.5%. Concerning tumor grade, the most frequent type was found to be poorly differentiated (38.2%), followed by well differentiated (8.8%) followed by the least frequent type the moderately differentiated (5.9%). No significant correlation was observed between patients age and histological grade of the tumor ( $p, v. = 0.105$ ).

In this study no significant correlation was found between histological type and tumor grade and p63 expression; ( $p, v. = 0.112$  for the correlation between histological type and p63 expression and  $= 0.330$  for the correlation between tumor grade and p63 expression).

### DISCUSSION

Ovarian cancer is one of the highly lethal malignancy. Its biological behavior is poorly understood and little is known about its pathogenesis (Poli Neto OB, 2006). p63 is a homologue gene of the tumor suppressor p53. p63 appears to be important for the development and differentiation of reproductive epithelium and interacts with p53 in human tumorigenesis (Poli Neto OB, 2006). The main p63 functions are associated with morphogenesis, epithelial development and differentiation. In this study concentration was made on the expression of p63 as it is known that p63 have a role in development of benign and malignant epithelial

ovarian tumors (PoliNeto OB, 2006). Cai Y et al (2014) found that normal ovarian tissues showed completely negative staining for p63. No significant correlation was found in this study between p63 expression and both tumor type and tumor grade. This is consistent with the fact that p63 is overexpressed in human cancers despite the type or the grade of the tumor (Flores, 2007). As with the small sample size of samples used in this study, larger sample size is needed to highlight the role of p63 in ovarian cancer behavior.

#### REFERENCES

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