

**1. Semi-quantitative assessment:** A minimum of 100 tumor cells were scored. Those cervical tissues with P53 immunostaining in at least 5% of the cell nuclei were considered to have P53 over-expression<sup>(14)</sup>.

Scoring was done at X40 objective as follows<sup>(14)</sup>:

-Negative (score 0): None of the cells revealed positivity for P53 marker.

-Weak or mild: Staining [(5 %-< 10%) positive of tumor cells] (score +1)

-Moderate: Staining (<25%) (Score +2)

-Strong: Staining (>25 %-< 50%) (Score +3)

-Highly strong: (over 50%) (Score +4)

**2. Pattern of staining:** The pattern was classified into Diffuse, Regional and Focal. It was considered Diffuse if the P53 positive cells were distributed through almost all the section as homogenous distribution, while considered Regional if more than one area of section showed large number of P53 positive cells, and it was considered Focal if P53 positive cells were localized in only one area of the section<sup>(15)</sup>.

**3. Intensity of the staining:** The intensity of the brownish coloration was graded as strong, moderate or weak. It is strong if the brownish coloration is detected very clearly even at low power (100) and moderate if it was detected with difficulty at low magnification while if P53 positivity could only be detected at high magnification (1000) it was considered weak<sup>(16)</sup>.

**Statistical analysis** was done using student t-test where P value of <0.05 was considered significant.

### **Results**

Forty two cases of cervical cancer were included in this study; 30 cases of squamous cell carcinoma their age ranges from (30-65) years with a mean age of (47.50±1.94 S.D.) years. And 12 cases of adenocarcinoma their age

ranges from (32-45) years with a mean age of (38.50±1.11 S.D.) years. From the descriptive analysis, there was a significant difference between the mean age of the two histological types; the mean age of adenocarcinoma was significantly lower than that of the squamous cell carcinoma (P<0.05). (Figure1)

Histopathologically, there were 30 cases of squamous cell carcinoma: 4(13.33%) cases were well – differentiated, 17(56.66%) cases were moderately –differentiated and 9 (30%) cases were poorly differentiated, and 12 cases of adenocarcinomas: 2(16.66%) cases were well – differentiated, 5(41.66%) cases were moderately –differentiated and 5(41.66%) cases were poorly – differentiated adenocarcinomas, from the descriptive analysis shown in (Table 1) there was no significant difference between the grade of the tumor and the two histological types. (P>0.05)(Figure 2)

Immunohistochemical staining of P53 showed granular brown nuclear staining in positive cases, from the total 42 cases of invasive cervical carcinoma; 30 (71.43%) cases were found to be negative immunohistochemical expression of P53 with a (score 0), while 12 (28.57%) cases showed a positive over-expression of P53, 5(11.91%) cases were considered as score 1, 3(7.14%) cases were considered as score 2, 2(4.76%) cases were considered as score 3 and 2(4.76%) cases were considered as score 4 as shown in (Table 2).

The pattern of nuclear immunostaining of the 12 positive cases was in 4 (33.33%) cases having a diffuse pattern, 2 (16.67%) cases having a Regional pattern, and 6(50%) cases having a Focal pattern as shown in (Figures 3 and 4).