The current study was designed to investigate the effects of the anticancer drug Paclitaxel on both histological and immunological aspects in laboratory
rats (*Rattus norvegicus*). The rats were divided into three groups, each .comprising 12 rats
The results of the study indicated a significant decrease at a probability level
of $P \leq 0.05$ in hematological parameters, including white blood cell count, and
the percentage of lymphocytes, neutrophils, eosinophils, and basophils in rats
.treated with Paclitaxel at doses of 2 mg/kg and 4 mg/kg
Furthermore, a significant reduction was observed in the red blood cell count
at the same probability level ($P \leq 0.05$), with the higher dose (4 mg/kg) showing a more pronounced effect compared to the lower dose (2 mg/kg)
Histological examination of tissue sections revealed pathological changes in
the liver, kidneys, and lungs of the treated rats. Liver tissue sections showed
degeneration and necrosis of hepatocytes, inflammatory cell infiltration, edema around the central hepatic vein, vascular congestion, and irregularities
.in hepatic cells
The kidney tissue sections displayed clear histological changes, including hemorrhagic congestion in blood vessels, bleeding, necrosis, and congestion in
.the glomerular capillaries
Lung tissue sections exhibited notable changes, including inflammation, tissue
damage, necrosis, and degeneration, as well as inflammation in the connective
.tissue surrounding the blood vessels
Laboratory analyses using ELISA showed that the low-dose group had a significant increase ($P \leq 0.05$) in IL-8 levels, while the high-dose group
.exhibited a significant decrease ($P \leq 0.05$) in serum interleukin-8 level