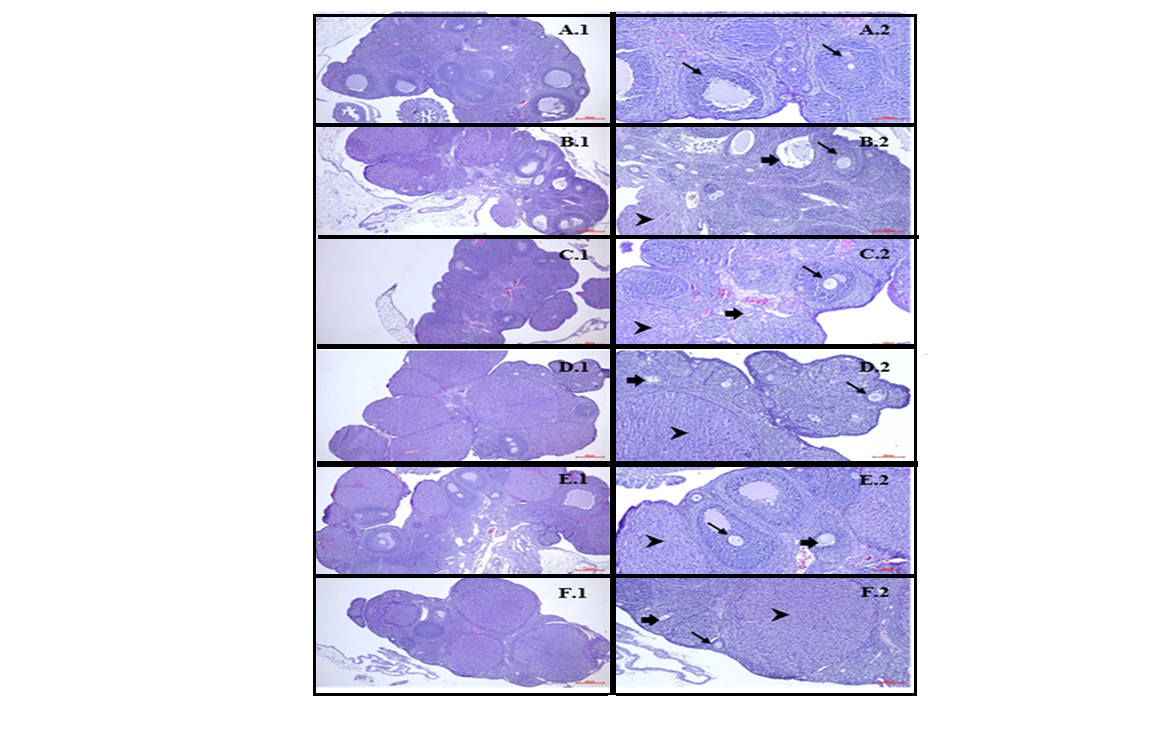
**Table 1. Morphological and TUNEL staining findings in the experimental group**

|  | **Group 1**  **(Kontrol grubu)** | **Group 2**  **(ZNS)** | **Group 3 (STM)** | **Group 4**  **(LCM)** | **Group 5**  **(CLB)** | **Group 6**  **(RUF)** | **p value** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of follicles** | 20,10±1,66  (18-23)  \* | 7,80±1,93  (4-10)  \*, \*\* | 12,50±1,58  (10-15)  \*, \*\*, \*\*\* | 16,30±2,31  (13-21)  \*, \*\*,\*\*\* ,\*\*\*\* | 12,80 ±2,14  (10-16)  \*, \*\*, \*\*\*\*,\*\*\*\*\* | 16,30 ±2,11  (14-21)  \*, \*\*,\*\*\*,\*\*\*\*\* | p<0,001  (\*p<0,001  \*\*p<0,001  \*\*\*p<0,001  \*\*\*\*p=0,003  \*\*\*\*\*p=0,003) |
| **Number of corpus luteum** | 2,40±1,07  (1-4)  \* | 8,00±2,11  (4-11)  \*, \*\*, \*\*\* \*\*\*\* | 5,70±1,34  (4-8)    \*, \*\* | 6,70±1,16  (5-8)  \* | 5,80±1,03  (4-7)  \*, \*\*\* | 6,00±1,88  (4-9)  \*, \*\*\*\* | p<0,001  (\*p<0,001  \*\*P=0,013  \*\*\*p=0,020  \*\*\*\*p=0,045) |
| **TUNEL positive ovarian follicle count** | 1,70± 0,67  (1-3)  ^ | 8,80 ± 1,48  (7-11)  ^, ^^, ^^^ | 4,60 ±0,97  (3-6)  ^ | 3,00 ± 1,05  (2-5)  ^^ | 5,40±1,07  (4-7)  ^ | 3,00±1,33  (1-5)  ^^^ | p<0,001  (^p<0,001  ^^p<0,001  ^^^p<0,001) |
| **TUNEL positive granulosa cell count** | 3,30 ± 1,42  (2-6)  \* | 19,80±3,39  (16-16)  \*,\*\* | 14,00± 2,49  (10-18)  \*,\*\*,\*\*\* | 11,00± 1,63  (9-14)  \*,\*\* | 13,80±2,86  (10-18)  \*,\*\*  • Data presented as mean ± standard deviation (min-max), p < 0.001. ZNS, zonisamide, STM, sultiam; LCM, lacosamide; CLB, clobazam; RUF, rufinamide. \*\*,\*\*\*,\*\*\*\*,\*\*\*\*\* p<0.001; Anova analysis and posthoc analysis results between groups. ^, ^^, ^^^ p<0.001; Kruskall Wallis Analysis of Variance and Posthoc Analysis Results Between Groups | 10,40±1,71  (8-13)  \*,\*\*,\*\*\* | p<0,001  (\*p<0.001  \*\*P<0,001  \*\*\*p=0,025) |

**Table 2. HSCORE of immunohistochemical staining in experimental groups**

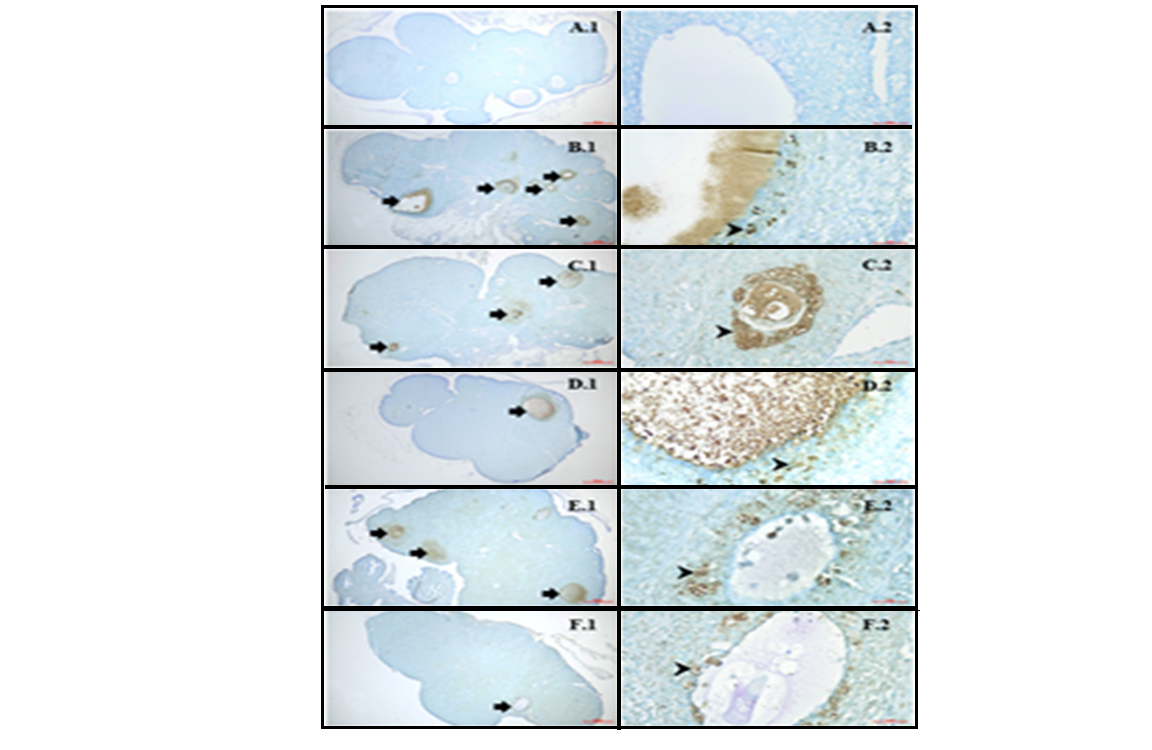
|  | **Group 1**  **(Kontrol grubu)** | **Group 2**  **(ZNS)** | **Group 3**  **(STM)** | **Group 4**  **(LCM)** | **Group 5**  **(CLB)** | **Group 6**  **(RUF)** | **p value** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **IGF-1** | 207,30±15,06  (186-232)  \* | 68,20±5,85  (60- 78)  \*, \*\* | 116,40±9,37  (102-132)  \*,\*\*,\*\*\* | 148,90±12,42  (132-168)  \*,\*\*,\*\*\*,\*\*\*\* | 109,50 ±5,91  (102-120)  \*,\*\*,\*\*\*,\*\*\*\* | 146,50±7,82  (136-159)  \*,\*\*,\*\*\* | p<0,001  \*p<0,001  \*\*p<0,001  \*\*\*p<0,001  \*\*\*\*p<0,001 |
| **EGF** | 190,30±10,73  (171-206)  \* | 64,40±5,21  (58-73)  \*,\*\* | 112,60±6,58  (104-128)  \*,\*\*,\*\*\* | 145,00±12,01  (128-163)  \*,\*\*,\*\*\*,\*\*\*\* | 106,30±6,60  (98-116)  \*,\*\*,\*\*\*\* | 142,10±8,02  (131-155)  \*,\*\*,\*\*\* | p<0,001  \*p<0,001  \*\*p<0,001  \*\*\*p<0,001  \*\*\*\*p<0,001 |
| **GDF-9** | 72,40 ± 5,06  (67-82)  \* | 10,00 ± 1,49  (8-12)  \*,\*\* | 11,10 ± 1,20  (9-13)  \*,\*\*\* | 11,10 ± 2,02  (8-14)  \*,\*\*\*\* | 10,10±1,66  (8-13)  \* | 59,30±6,82  (52-72)  \*,\*\*,\*\*\*,\*\*\*\* | p<0,001  \*p<0,001  \*\*p<0,001  \*\*\*p<0,001  \*\*\*\*p<0,001 |

**•** Data presented as mean ± standard deviation (min-max), p < 0.001 . ZNS, zonisamide, STM, sulthiam; LCM, lacosamide; CLB, clobazam; RUF, rufinamide. IGF-1, insulin-like growth factor 1; EGF, Epidermal Growth Factor; GDF-9, growth and differentiation factor-9. \*\*, \*\*\*, \*\*\*\*, \*\*\*\*\* p<0.001; Anova analysis and Cross-Group Posthoc analysis results

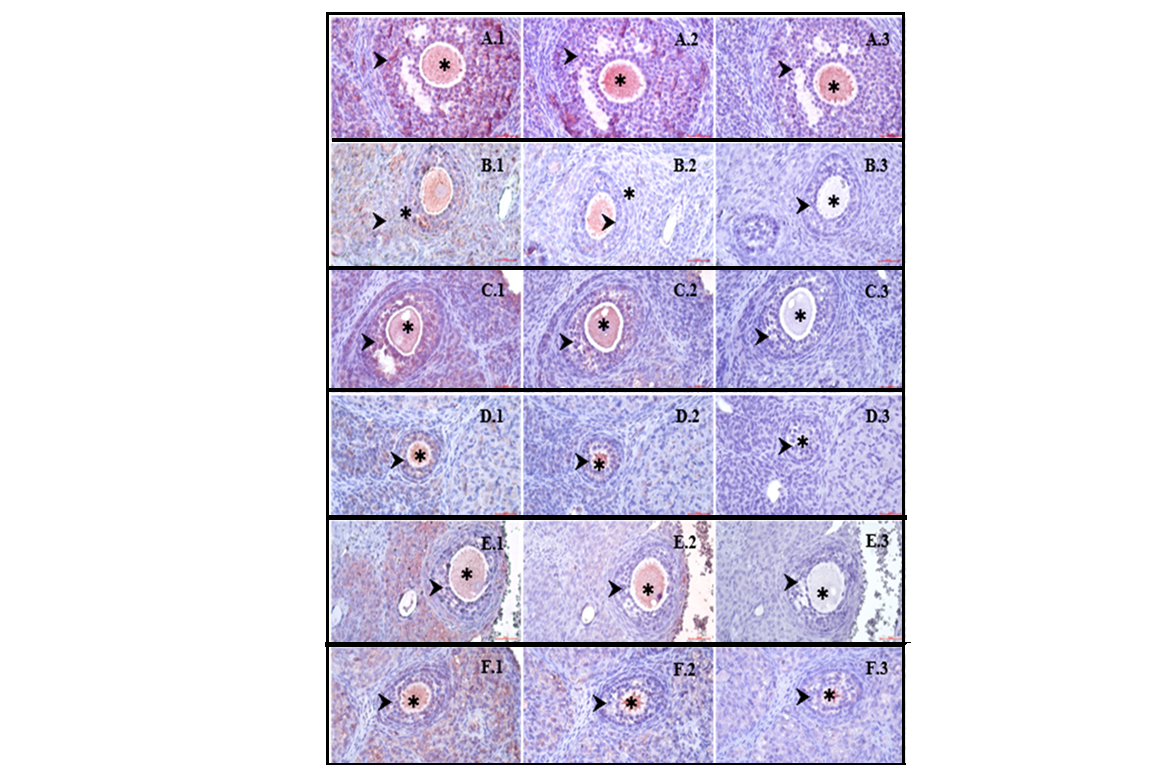


**Figure 1**: Ovarian hematoxylin-eosin staining. ⮞: Corpus Luteum 🡆: Atretic follicle, 🠦: Healthy follicle. Control (A), ZNS (B), STM (C), LCM (D), CLB (E), RUF (F).

Whole ovarian tissue (1) (x40) Bar = 30μm, (2) (X100) Bar = 200μm.



**Figure 2**: Ovarian Tunnel staining. 🡆: Atretic follicle, ⮞: Tunnel positive cells. Control (A), ZNS (B), STM (C), LCM(D), CLB (E), RUF (F). Whole ovarian tissue (1) (x40) Bar = 30μm, (2) (X40) Bar = 4μm.



**Figure 3**: Ovary multilaminar primary follicle immunohistochemistry staining. 🞹: oocyte, ⮞: Granulosa cells. Control (A), ZNS (B), STM (C), LCM (D), CLB (E), RUF (F). Whole ovarian tissue. EGF (1), IGF-1 (2), GDF-9 (3). (x400) Bar = 4μm