



## SPECTRUM OF OVARIAN PATHOLOGIES : A HISTOPATHOLOGICAL STUDY OF RECEIVED OOPHORECTOMY SPECIMENS

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**ABSTRACT** **Background & Objectives:** Ovarian lesions, common across all ages, often present as pelvic masses. Since clinical and radiological diagnoses alone are challenging, histopathological examination is essential for precise identification, management, and prognostication. This study analyzed the spectrum of 73 ovarian lesions and categorized them based on histomorphological patterns. **Results:** The 73 cases spanned an age range of 20 to 72 years. Neoplastic lesions (41 cases or 56.2%) were slightly more common than non-neoplastic lesions (32 cases or 43.8%). The most frequent non-neoplastic lesion was the corpus luteal cyst (12 cases). Among the 41 neoplastic lesions, 37 were benign, and 4 were malignant. Mature cystic teratoma was identified as the most common benign lesion. **Conclusion:** Histopathology remains the gold standard for diagnosing ovarian lesions and is paramount for optimal patient care and accurate management. **Study Summary:** This histopathological study, which analyzed 73 oophorectomy and biopsy specimens from November 2023 to October 2025, provided a clear categorization of ovarian pathologies based on morphology. The cases presented predominantly in the 3rd and 5th decades of life. Overall, the study found a majority of neoplastic lesions (56.2%, 41 cases) compared to non-neoplastic lesions (43.8%, 32 cases). The non-neoplastic lesions were most frequently corpus luteal cysts (12 cases), followed by follicular cysts (9 cases). Regarding neoplastic lesions, most were benign (37 cases), with the mature cystic teratoma being the most common type (14 cases), followed by mucinous cystadenoma (10 cases). Only 4 cases were classified as malignant. The study reinforces that distinguishing between these diverse pathologies, which often present similarly as cystic swellings, requires a definitive diagnosis. Therefore, histopathological evaluation is indispensable as the gold standard, ensuring accurate management by correlating findings with clinical and radiological data.

**KEYWORDS :** ovarian neoplasms, histopathology, diagnosis

### INTRODUCTION:

Ovarian lesions are a complex diagnostic challenge due to the need to distinguish between neoplastic and non-neoplastic conditions that can mimic malignancies. Histological analysis is crucial for effective management. Lesions are classified by histomorphology (non-neoplastic, benign, borderline, malignant) and cell type (epithelial, sex cord stromal, germ cell tumors). Non-neoplastic functional cysts (like corpus luteal and follicular cysts) are common, often regress, and are seen in young women. Neoplastic tumors are classified by cellular origin. Most (80%) are benign (ages 20-45), while malignant tumors are more common in women aged 45-65. Ovarian tumors are often difficult to detect early, earning them the name "silent killers". This study's aim is to analyze and categorize the spectrum of ovarian lesions to improve understanding and guide precise treatment.

This is a retrospective observational study done for the oophorectomy specimens received between 1st November 2023 to 31st October 2025 in the department of Pathology, GMERS Medical College and Hospital, Sola, Ahmedabad.

**Inclusion Criteria:** All the ovarian specimens received in the Pathology department in the form of resected ovarian masses/ cystectomy specimens, ovarian biopsy specimens, tubo-ovarian masses and hysterectomy with salpingo-oophorectomy specimens.

**Exclusion Criteria:** Normal ovaries and specimens other than ovaries were excluded from the study.

A total of 73 cases were included in our study.

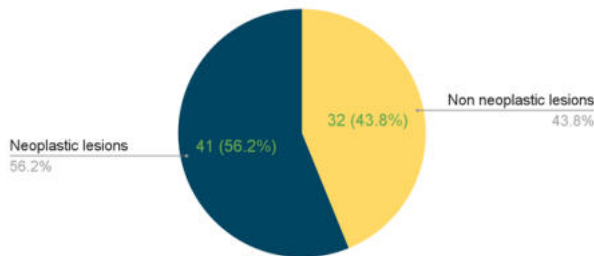
### MATERIALS AND METHODS:

**Table-1: Distribution Of Ovarian Tumours Based On Age And Histopathological Diagnosis**

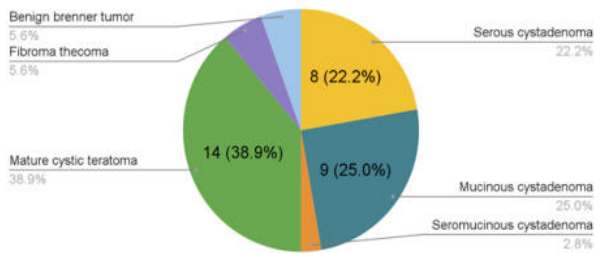
Category	Histopatho-logical Diagnosis	AGE GROUP (IN YEARS)						Total No. Of Cases
		Up to 20	21-30	31-40	41-50	51-60	>60	
<b>NON-NEOPLASTIC</b>								
	Follicular cyst	0	4	3	2	0	0	9
	Endometriosis	0	2	2	0	0	0	4
	Corpus luteal cyst	0	5	2	5	0	0	12
	Paraovarian cyst	0	2	3	2	0	0	7
<b>NEOPLASTIC</b>								
<b>I. SURFACE EPITHELIAL TUMOURS</b>								
<b>A) SEROUS TUMOURS</b>								
BENIGN	Serous cystadenoma	0	2	2	3	0	1	8
<b>B) MUCINOUS TUMOURS</b>								
BENIGN	Mucinous cystadenoma	0	2	3	3	1	1	10
<b>C) SEROMUCINOUS TUMOURS</b>								
BENIGN	Seromucinous cystadenoma	0	0	1	0	0	0	1
<b>D) TRANSITIONAL TUMOURS</b>								
BENIGN	Benign Brenner tumor	0	0	1	1	0	0	2
<b>II. SEX CORD STROMAL TUMOURS</b>								
BENIGN	Fibroma thecoma	0	0	0	0	1	1	2
<b>III. GERM CELL TUMOURS</b>								
BENIGN	Mature cystic teratoma	2	6	2	4	0	0	14
MALIGNANT	Dysgerminoma	0	0	1	0	0	0	1

MALIGNANT	Mature teratoma with area of malignant transformation	0	0	0	1	0	0	1
METASTATIC								
MALIGNANT	Metastasis from Endometrial carcinoma with 10% serous component	0	0	0	1	0	0	1
MALIGNANT	Metastasis from mucinous adenocarcinoma of colon	0	0	0	0	0	1	1

**BROAD CLASSIFICATION OF OVARIAN LESIONS**



**Figure 1 :** Overall distribution of ovarian lesions



**Figure 2 :** Distribution of various neoplastic benign lesions of ovary

In our study 73 cases of ovarian lesions were included. Most cases presented in the 3rd and 5th decade of life. A study done by Purti Agrawal et al [10] had a peak incidence of ovarian tumors in the 3rd and 5th decade of life.

Non neoplastic lesions were 32/73 cases (43.83%) and neoplastic lesions were 41/73 cases (56.16%). Studies done by Nehal Ahmad et al [13] showed non neoplastic 55.8% and neoplastic 44.2%. The most common non neoplastic lesion was corpus luteal cyst (12/32 cases) followed by follicular cyst. Studies done by Ashraf et al [16] had similar findings. Studies done by A. Sawant et al [12] and Thakkar et al [13] had follicular cyst as the commonest non neoplastic lesion.

The commonest neoplastic lesion encountered in present study was mature cystic teratoma (32.78%) which was in concordance with study done by Charel M et al.[9]. Mondal et al. had serous cystadenoma (32.57%) as the most common histologic type followed by mucinous cyst adenoma (15.71%) [7].

Ovarian lesions contribute a major proportion of the cases of abdominal and pelvic swellings in the female population. The prevalence of various ovarian pathologies varies by age. Radiological investigations like transvaginal ultrasonography and CT scan are helpful in accessing size, spread and probable diagnosis of ovarian lesions. Many studies concluded that grossly most of non neoplastic and neoplastic ovarian lesions present as cystic swellings; while malignant and borderline lesions are partly solid and partly cystic. However, histopathological confirmation always remains the gold standard for the diagnosis. It also helps in clinical staging and appropriate management of the patients.

**DISCUSSION:**

- In our study 73 cases of ovarian lesions were included. Most cases presented in the 3rd and 5th decade of life. A study done by Purti Agrawal et al [10] had a peak incidence of ovarian tumors in the 3rd and 5th decade of life.
- Non neoplastic lesions were 32/73 cases (43.83%) and neoplastic lesions were 41/73 cases (56.16%). Studies done by Nehal Ahmad et al [13] showed non neoplastic 55.8% and neoplastic 44.2%. The most common non neoplastic lesion was corpus luteal cyst (12/32 cases) followed by follicular cyst(9/32 cases) followed by paraovarian cyst (7/32 cases). Studies done by Ashraf et al [16] had similar findings. Amod Sawant et al,[14] Thakkar et al [15] had follicular cyst as the commonest non neoplastic lesion.
- Commonest neoplastic lesion encountered in present study was mature cystic teratoma (32.78%) followed by mucinous cystadenoma which was in concordance with study done by

Charel M et al.[11] Mondal et al. had serous cystadenoma (32.57%) as the most commonest histologic type followed by mucinous cyst adenoma (15.71%).

- Ovarian lesions contribute a major proportion of the cases of abdominal and pelvic swellings in the female population. The prevalence of various ovarian pathologies varies by age. Radiological investigations like transvaginal ultrasonography and CT scan are helpful in accessing size, spread and probable diagnosis of ovarian lesions. Many studies concluded that grossly most of non neoplastic and neoplastic ovarian lesions present as cystic swellings; while malignant and borderline lesions are partly solid and partly cystic. However, histopathological evaluation confirmation always remains the gold standard for the diagnosis. It also helps in clinical staging and appropriate management of the patients.

**CONCLUSION:**

Ovarian lesions are common, especially in younger women, and often asymptomatic, making early detection difficult. Due to the diverse nature of ovarian lesions, comprehensive histopathological examination is essential. Without precise histopathological assessment, there's a significant risk of diagnostic error and suboptimal interventions. Therefore, thorough histopathological evaluation of all ovarian lesions is paramount for optimal patient care.

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