

## **Imaging Features of Ovarian Cystic Lesions with Emphasis on Differential Diagnosis**

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### **Background and Purpose**

Ovarian cystic lesions are broad spectrum from physiologic, benign functional cyst to the malignant cystadenocarcinoma. Treatment of choice may often be problematic, especially in young reproductive women. Precise knowledge of clinical and imaging features, especially MR imaging is crucial in establishing an accurate diagnosis and determining treatment. The purpose of this presentation is to discuss MR strategies for identification and characterization of ovarian cystic lesions.

### **Material and Methods**

In this presentation, we describe imaging features of the tumorous (cystic neoplasm including cystadenofibroma, mature cystic teratoma, struma ovarii and malignant transformation arising from endometriosis) and non-tumorous (functional ovarian cyst including follicular cyst, corpus luteal cyst and theca luteal cyst, ovarian hyperstimulation syndrome, endometriosis, hemorrhagic cyst, paraovarian cyst, peritoneal inclusion cyst, tuboovarian abscess, polycystic ovarian syndrome, and massive ovarian edema) ovarian cystic lesions. We correlate imaging features with clinical and pathologic features.

We also describe specific considerations such as daughter cyst sign and stained glass appearance. We list limitations and pitfalls.

### **Results**

Precise knowledge of clinical and imaging features, especially MR imaging is crucial in establishing an accurate diagnosis and determining treatment.

<b>Summary</b>		<b>Summary</b>	
<b>Tumorous Cystic Lesions</b>		<b>Non-Tumorous Cystic Lesions</b>	
▪ Epithelial Cystic Neoplasm	Large cystic lesion	▪ Functional Ovarian Cyst	
▪ Cystadenofibroma	Low SI nodule or wall thickening on T2WI	▪ Follicular Cyst	Thin wall, Regression, Hx
▪ Mature Cystic Teratoma	Fat, Calcification, Cyst	▪ Corpus Luteal Cyst	Thick wall, Regression, Hx
▪ Struma Ovarii	Low SI on T1- & T2WI	▪ Theca Luteal Cyst	Bilateral, Multilocular, Hx
▪ Malignant Transformation arising from Endometriosis	Solid portion >>, High SI on T1 & T2	▪ Ovarian Hyperstimulation Syndrome	
		▪ Endometriosis	T2 shading (T1 High + T2 Low)
		▪ Hemorrhagic Cyst	Fluid-fluid level, F/U study

### **Conclusion**

Knowledge of key features of ovarian cystic lesions provides the criteria for making diagnosis or substantially narrowing the differential diagnosis. Familiarity with the clinical setting and imaging features of various ovarian cystic lesions as depicted with US, CT, and MR will facilitate prompt and accurate diagnosis and treatment.