

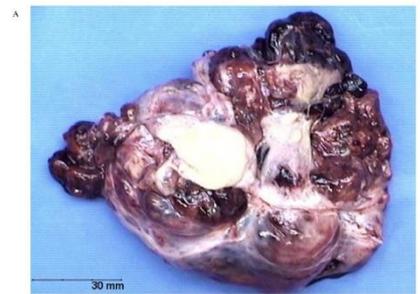
Cancer Association of South Africa (CANSA)



Fact Sheet on Teratoma of the Ovary

Introduction

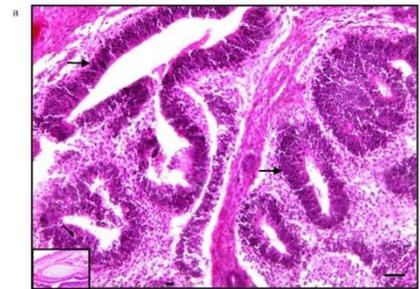
Teratomas are a type of germ cell tumour that may contain several types of body tissue. They are made up of tissues, such as hair, muscle and bone. They most often occur in the ovaries in women and the testicles in men. They may be benign or malignant. Symptoms relating to teratomas vary depending on their location. A painful lump or swelling may be apparent. Treatment often involves surgery. In rare cases when a teratoma is malignant, chemotherapy or radiation may be required.



[Picture Credit: Immature Ovarian Teratoma]

Teratoma of the Ovary

Teratomas are classified as mature (usually benign) or immature (likely cancerous). The likelihood of cancer depends on where in the body the teratoma is found. Most ovarian teratomas are mature. The mature ovarian teratoma is also known as a dermoid cyst. About 1 to 3% of mature ovarian teratomas are cancerous. They're usually found in women during their reproductive years. Immature (malignant) ovarian teratomas are rare. They are usually found in girls and young women up to about the age of 20.



Incidence of Immature Teratoma of the Ovary in South Africa

The South African National Cancer Registry (2017) does not provide any information regarding the incidence of Teratoma of the Ovary.

Signs and Symptoms of Immature Teratoma of the Ovary

When symptoms are present, they may include abdominal pain, mass or swelling, and abnormal uterine bleeding. Bladder symptoms, gastrointestinal disturbances, and back pain are less frequent. When abdominal pain is present, it usually is constant and ranges from slight to moderate in intensity.

Researched and Authored by Prof Michael C Herbst

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Approved by Ms Elize Joubert, Chief Executive Officer [BA Social Work (cum laude); MA Social Work]

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Diagnosis of Teratoma of the Ovary

Mature teratomas can be diagnosed by an **ultrasound**, a computed tomography scan (CT scan), and a magnetic resonance imaging (MRI) scan. Immature and monodermal teratomas can be diagnosed by a combination of clinical features and imaging scans.

Saleh, M., Bhosale, P., Menias, C.O., Ramalingam, P., Jensen, C., Iyer, R. & Ganeshan, D. 2021.

“Ovarian teratomas are the most common type of germ cell tumors. There are three major subtypes of ovarian teratomas including mature, immature, and monodermal teratomas. Ultrasound, computed tomography and magnetic resonance imaging can demonstrate specific imaging findings for mature teratoma. Imaging features of immature and monodermal teratomas are less specific, but a combination of clinical features and imaging findings can help in the diagnosis. Imaging is also very helpful in guiding management. In this article, we review the epidemiology, histopathology, clinical presentation, imaging features and management of ovarian teratomas.”

Treatment of Immature Teratoma of the Ovary

The management of ovarian immature teratoma (IT) presents several challenges. It occurs both in children and adults and therefore is managed by pediatric oncologists as well as adult and gynecologic oncologists. Treatment approach; however, varies significantly. Unlike pediatric patients in whom surgery is considered the mainstay of treatment, adult providers routinely prescribe postoperative chemotherapy. Management of recurrent IT can be challenging.

Bergamini, A., Sarwar, N., Ferrandina, G., Scarfone, G., Short, D., Aguiar, X., Camnasio, C., Kaur, B., Savage, P.M., Cormio, G., Lim, A., Pignata, S., Mangili, G. & Seckl, M.J. 2020.

Background: The role of surveillance after surgery for stage IA-C grade 2 (G2) or grade 3 (G3) immature teratomas (ITs) is controversial with many guidelines advocating adjuvant chemotherapy. Here, we investigate the safety of surveillance in stage IA-C G1-3 ITs.

Methods: Clinicopathological data were analysed on postpubertal patients with stage I pure ITs in Multicenter Italian Trials in Ovarian Cancer centres and at Charing Cross Hospital, UK, between January 1985 and January 2018.

Results: Of 108 stage I patients, 66 (61.1%), 3 (2.8%) and 39 (36.1%) were International Federation of Gynecology and Obstetrics IA, IB, IC, respectively, with 31 (28.7%), 41 (38%) and 36 (33.3%) having grade 1 (G1), 2 and 3 disease, respectively. After surgery, 27 patients (25%) had adjuvant chemotherapy and 81 (75%) surveillance. There was no significant increase in the risk of malignant (G2-3 IT) relapse (9/81 vs 2/27; $p = 0.72$) or in disease-free survival (DFS) or overall survival in the surveillance vs chemotherapy groups. The median time to relapse was 17.8 months (range: 3-47) with no significant difference between surveillance or chemotherapy groups. The median follow-up was 64.3 months (Interquartile range (IQR) 22.2-101.7). Chemotherapy induced cures in all except for one patient who did not follow the surveillance protocol due to pregnancy and died of disease. Univariate and multivariate analyses revealed that only tumour grade (hazard ratio [HR] = 3.11; $p = 0.02$) and complete surgical staging (HR = 0.2; $p = 0.01$) were independent prognostic factors for decreased DFS.

Conclusion: The present study suggests that in the adult setting careful surveillance appears to be an acceptable alternative to adjuvant chemotherapy for stage IA-C ITs of any grade, properly staged and with negative postoperative tumour markers.

About Clinical Trials

Clinical trials are research studies that involve people. They are conducted under controlled conditions. Only about 10% of all drugs started in human clinical trials become an approved drug.

Clinical trials include:

- Trials to test effectiveness of new treatments
- Trials to test new ways of using current treatments
- Tests new interventions that may lower the risk of developing certain types of cancers
- Tests to find new ways of screening for cancer

The [South African National Clinical Trials Register](#) provides the public with updated information on clinical trials on human participants being conducted in South Africa. The Register provides information on the purpose of the clinical trial; who can participate, where the trial is located, and contact details.

For additional information, please visit: www.sanctr.gov.za/

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Sources and References Consulted and/or Utilised

Bergamini, A., Sarwar, N., Ferrandina, G., Scarfone, G., Short, D., Aguiar, X., Camnasio, C., Kaur, B., Savage, P.M., Cormio, G., Lim, A., Pignata, S., Mangili, G. & Seckl, M.J. 2020. Can we replace adjuvant chemotherapy with surveillance for stage IA-C immature ovarian teratomas of any grade? an international multicenter analysis. *Eur J Cancer*. 2020 Sep;137:136-143.

Immature Ovarian Teratoma Graphic

<https://jmedicalcasereports.biomedcentral.com/articles/10.1186/1752-1947-5-540>

Immature Ovarian Teratoma

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Ovarian Teratoma

<https://www.medscape.com/answers/281850-188226/what-are-the-signs-and-symptoms-of-ovarian-teratomas>
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https://www.medicinenet.com/how_are_ovarian_teratomas_treated/article.htm
<https://pubs.rsna.org/doi/10.1148/radiographics.21.2.g01mr09475>
[https://www.jogc.com/article/S1701-2163\(16\)30489-3/pdf](https://www.jogc.com/article/S1701-2163(16)30489-3/pdf)
<https://www.healthline.com/health/teratoma>

Saleh, M., Bhosale, P., Menias, C.O., Ramalingam, P., Jensen, C., Iyer, R. & Ganeshan, D. 2021. Ovarian teratomas: clinical features, imaging findings and management. *Abdom Radiol (NY)*. 2021 Jun;46(6):2293-2307.

Teratoma

<https://www.healthline.com/health/teratoma#treatment>

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