Poise

SAVE yourself from CANCER

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Dear IMS and Club35 + family members

Wishing you all a Happy New Year and praying that coming 2021 would be a safe and prosperous year. With immense pleasure I am now presenting *POISE -3* Prepared by our dynamic chairperson of public awareness committee Dr. Arti Gupta.

This Poise presents articles on cancer. *This is a part one of cancer issue. We will bring soon the part two of cancer.* Cancer is a disease dreaded by us all. We have made efforts to make you all aware of the disease. Screening methods diagnosis of the various cancers has been covered. This will increase awareness of the public regarding various cancers. Earlier the diagnosis is made better is its management.

This year has also been unique as club 35+ has made its members to participate in many activities like photography and rangoli contests. Hope to see many more such activities in the coming year.

So let us all together “fight and survive” from cancer.

*Dr. Jigneesh Shah*
President, IMS
Dear friends,

Hope ..... All is well with you & your family members. I am sure all of you must have enjoyed Diwali with proper social distancing. Let us welcome the new year 2021 also with the similar social distancing, as even today we have not become 'Corona free.' I am sure all of you must have enjoyed the previous two "Poise", prepared by our enthusiastic Chairperson of Public Awareness Committee, Dr Arti Sharma Gupta.

This "Poise" is a unique piece, containing a lot many articles on 'Cancer'. Most of the people have a very wrong belief..."Cancer means Cancel.....".

So most of the time, a lady doesn't consult a health care provider for her various illnesses. We know.... 'Prevention is better than cure' We want, our women should get themselves screened for various cancers, so that they may not become the victim of various cancers.

The articles of this "Poise", regarding various cancers will definitely give very crisp messages to all our club 35 members, so that they can protect themselves & their near & dear ones from various cancers..

Dr. Anita Shah

Secretary IMS
**EDITORIAL Message....**

*Dear Friends,*

I hope that this note finds each of you very well. It is with great hope for this coming year that I wish you all a very *Happy and Healthy New Year*. With this New Year, we are excited to present you the third issue of Poise.

Even though most of our attention has been focused on the global pandemic this year, it is important to stay aware towards other issues of medical concern. Since Cancer is a very vast topic we shall be coming up with one more edition on it. Specific focus has been placed on the importance of regular examination and tests. We have to the best of our abilities, tried to address questions relating to the “*What, When, and How*” of Cancer screenings, prevention and treatment.

Additionally, in a continued effort to spread awareness, I would like to encourage all chapters of the Indian Menopause Society to start Club 35+ to take the lead on health awareness programs. I would like to congratulate the Club 35+ being run in *Varanasi* and *Kanpur* for their exemplary success, paving the way for the rest to follow.

Lastly, I hope that this issue will prove to be helpful read for all of you. Again, Happy New Year! I certainly hope to be able to convene as usual again, soon. Until then, I’ll leave you with these lines:

« गर धान ले मन में तो क्या हो नहीं सकता क्या कर नहीं सकते, क्या गढ़ नहीं सकते आसमान को मुद्दी में ले सकते हैं हम पर्वतों पे चढ़ फ़ितह कर सकते हैं हम आओ बढ़े हम, करें कुछ जो खुद एक मिसाल बन जाये जब ना जी सकें तो, नाम अपना कुछ को तो याद आए.....

आपकी अपनी आरसी.....»
winners

Rangoli

1st Nishi Trivedi
2nd Komal Vora
3rd Sheela Sharma

Photography

1st Rekha Romi
2nd Minors Jiruwala
3rd

Light Effects

1st Brinda Shah
2nd Shagun Bazare
3rd Pushpa Singh

CONGRATULATIONS
QUIZ

November winners

Namrita Mishra
Agra

Ruchi Singhal
Agra, Kamla Nagar

Seema Vijayvargiya
Bhopal

Tripti Bameta
Kanpur

Deepa Belani
Rajkot

Rekha Tiwari
Raipur Club

Neha Ahluwalia
Chandigarh

Jyoti Gupta
Taj Group

December winners

Sweta Gogna
Dholpur

Ranjoo Bajpai
Kanpur

Sugandha
Chandigarh

Shabnam Jeeruwala
Vadodara

Kusum Patel
Ahmedabad

Anuradha Jayesh
Surat

Pushpa Thakur
Bhagalpur

Shobhani Gupta
Hum Saath Saath, Agra

Shilpa Trivedi
Rajkot Club

Sujata
Hyderabad Club

Neha Jain
Patsyala

Mridula Patni
Jaipur

Congratulations
Screening for Cancer means checking for early cancer or precancer in people who have no symptoms of it. It is helpful in detection and treatment of cancers timely and safely before they may have spread to other parts of the body. However, not all cancers have an effective screening test. It is also important to keep in mind that screening tests can have false negative as well as false positive results.

Cancer breast is the most common cancer in Indian women followed by Cancer Cervix, Cancer Ovary and Cancer Lip and oral cavity. (Globocan 2018)

Studies are being done to find the best screening test for ovarian cancer.

The Govt. of India’s screening guideline for the major cancers i.e., Cancer Breast, Cervix and Oral Cancer is discussed below.

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<th>Type of Cancer</th>
<th>Age of Beneficiary</th>
<th>Method of Screening</th>
<th>Recommended Frequency of Screening</th>
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<td>30 - 65 years</td>
<td>Clinical Breast Examination (CBE)</td>
<td>Once in 5 years</td>
<td>Refer to Surgeon at CHC/DH for confirmation using a breast ultrasound probe and biopsy as appropriate</td>
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<td>Oral</td>
<td>30 - 65 years</td>
<td>Oral Visual Examination (OVE)</td>
<td>Once in 5 years</td>
<td>Refer to Surgeon/Dentist/ENT specialist/Medical officer at CHC/DH for confirmation and biopsy</td>
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<tr>
<td>Cervical</td>
<td>30 - 65 years</td>
<td>Visual Inspection with Acetic acid (VIA)</td>
<td>Once in 5 years</td>
<td>Refer to the CHC/DH for further evaluation and management of pre-cancerous conditions where trained gynecologist is available</td>
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1. Breast Cancer Screening: Most cases of Breast cancer present as a painless lump or changes in the nipple/discharge.
   1. Breast Self-Examination (BSE) is done by the women herself.
   2. Clinical Breast examination: Done by Health Care Provider
   1. BSE:
1. Human Papilloma Virus DNA testing. This is the only cancer which can be detected at a precancer stage and can be treated as an office procedure. The Cervical precancer itself has no symptoms. The screening tests available for cancer cervix are:
   1. Human Papilloma Virus DNA testing.
   2. Visual Inspection with Acetic Acid application.
   3. Pap smear.

Cancer Cervix:

Oral Cancer:
Oral Self Examination:

In case of the following abnormalities, a dentist or a near health care facility should be visited.
   1. Difficulty in opening the mouth
   2. Thickening of cheek
   3. Difficulty in tolerating spicy foods
   4. Non healing extraction socket
   5. Excessive salivation.

REMEMBER PREVENTION IS BETTER THAN CURE
Do plastic and diet pollutants can cause cancers?

We are living in a world where environment pollution is affecting our day to day life and a matter of concerns. It leads to various health hazards in human being, and one of major contributor in cancer rise in population. Let’s discuss two points here which is integral part of our life and contributes in increasing incidence.

**Plastics**

We are surrounded by plastics in our daily use and it is not possible to avoid it. But we can take certain precaution to decrease its ill effects.

Researches have proven that scratched and heated plastic releases harmful chemicals such as bisphenol A (BPA), may cause cancer in people.

**How and why it causes danger to our health**

BPA has estrogen like activity and acts like hormone disruptors in body and can mimic oestrogen like activity on body organs. So it can act on tissues which are oestrogen sensitive like breast and can leads to cancer growth. It affects brain development in female fetus in womb also.

**How to reduce Its use in daily routine**

- Use BPA free plastics
- Avoid handling carbonless cash receipts
- Try to not use packaged food
- Carry your own water in bottles preferably in glass or steel

Some plastic material like PET, PVC, HDPE, POLYPROPELENE are considered safe to use but do not heat them. If the plastic doesn't also say "PLA" or have a leaf symbol on it, it may contain BPA.

**Steps to reduce exposure**

1. Try to minimize use of plastics in your Kitchen and in day today eating specially eating hot food or heating cooked food in micro wave.
2. Start replacing utensils with steel or glass
आहार जो करे केंसर का वार बेकार (केंसर का खतरा कम करने वाले खाद्य)

डॉ. टिशियन रेखा गुता

कंसर एक खतरनाक बीमारी है। विश्व में करीब 2 करोड़ लोग इस रोग से ग्रसित हैं और लगभग 90 लाख लोग हर वर्ष इस श्रेणी में जुड़े जाते हैं। सेल्स की अनियंत्रित वृद्धि जिनकी जरूरत शरीर को नहीं होती। इन अतिरिक्त सेल्स से टिश्यु के गुंजे बन जाते हैं जिसे हम ट्यूमर या गाँठ कहते हैं। यदि ट्यूमर आगे चलकर कंसर में तब्दील हो जाते हैं।

मुख्य कंसर, पेट का कंसर, सर्वाइकल कंसर, ब्रेस्ट कंसर, लंग कंसर आदि कंसर के प्रमुख प्रकार हैं। कंसर का पता यदि सुरुआती स्टेज में चल जाए तो इसका इलाज संभव है। लेकिन यदि आप नियमित रूप से स्वस्थ और सत्त्वित आहार लें तो तुरंत जानलेवा बीमारी से बचा जा सकता है। कंसर रोगी इस आहार को अपने डाइट चार्ट में डालकर कंसर की जटिलता को कम कर सकते हैं।

कंसर से बचाने वाले खाद्य पदार्थ

अदरक: अदरक में पाये जाने वाले एंटी आक्टीडेंटस कंसर की सेल्स में लगड़ते हैं। इसके नियमित सेवन से कंसर कम होने की सम्भावना होती है। यह कोलेस्ट्रोल भी कम करता है।

लहसुन: लहसुन बहुत महत्वपूर्ण आयुर्धिक है। लहसुन में एलियम नामक एंटीबायोटिक होता है। जिसमें कंसर से लड़ने की क्षमता होती है। लहसुन से कंसर कोशिकाओं जड़ी खत्म हो जाती है। इसमें H.Pylori नामक बैक्टीरिया से लड़ने के गुण होते हैं जो पेट में अल्सर और सर्वाइकल कंसर के कारण बनते हैं।

ऑवला: ऑवला विटामिन सी का अच्छा स्रोत है। ऑवला कंसर से बचाता है। ऑवला खाने से लीवर को शक्ति मिलती है, यह लीवर टोकिसंस को हमारे शरीर से बाहर निकलता है।

ऑवले का जूस खून को साफ करता है और कई अन्य रोगों में भी काम आता है।

ग्रीन टी: ग्रीन टी में पोलीफेनोल पाया जाता है, जो एंटी ओक्सिडेंट है और कंसर कोशिकाओं को बढ़ने से रोकता है।

शकरकंड: शकरकंड में बीटा करोटीन पाया जाता है जो कंसर के रसायनों से शरीर की कोशिकाओं को खा करता है।

गाजर: गाजर के सेवन से कंसर के रसायनों से बचने में मदद मिलती है। इसमें प्रचुर मात्रा में बीटा करोटीन होता है जो शरीर को सेल्स का कंसर से बचाता है।

मशरूम: मशरूम कंसर से बचाता है। इसमें बीटा गूँगे पाया जाता है। मशरूम में प्रोटीन होता है, जिसे लाविन कहते हैं। लाविन कंसर कोशिकाओं पर हमला करता है और उन्हें बढ़ने से रोकता है। मशरूम शरीर में इंटरफ्यूरन के उत्पादन को बढ़ाता है।

ब्लूबेरी और स्ट्राबेरी: डार्क सिकन फलों में एंटी ओक्सिडेंट होता है। जामुन शरीर के लिए बहुत फायदेमंद होता है। इसके सेवन से कंसर का खतरा कम होता है।
Orange PEEL CAKE

Dr. Vandana Narula

**Ingredients**

- 3 eggs
- 2 cups sugar
- 3 cups flour
- Baking soda 1tsf
- Baking powder 1tsf
- Oil 3/4 cup
- Peels of 3 oranges
- Kishmish 1/2 cup
- Milk 2 cups
- Walnuts crushed 1/2 cup

Mix eggs 1 cup sugar and whisk it thoroughly by beater add oil caramelized sugar shredded orange peel with kishmish. Keep whisking by beater. Add flour mixed baking soda and powder and keep beating to trap air into mixture. Pour in greased cake tray and put walnuts on top Bake at 180 degree in oven till done.
Vulvar cancer- Facts about Vulvar carcinoma:
It used to be one of the rare cancers of female genital tract occurring at advanced age (60-70yrs). Incidence is 1.7/100000 women
It Constitutes 3-5% of all female genital malignancies.

Changing scenario:
There is an increase in incidence of vulvar cancer.
Rise in incidence is due to increase in life expectancy of women and also its occurrence at a younger age group because of associated HPV (human Papilloma Virus) infection in younger women.

What is vulvar cancer?
Vulvar cancer is cancer occurring in external genitalia of a woman.
The most common sites in the order of frequency are labium majus, clitoris and labium minus.

Who gets vulvar cancer?
Any woman in advanced age can get this disease but a few women who have high risk factors are more prone to this disease.

The high risk factors are:
Advanced age, overweight and obesity, hypertension, immunodeficiency and smoking. Apart from these factors women who have HPV infection and chronic vulvar problems (vulvar intra epithelial neoplasia-lichen sclerosus) are also prone to vulvar carcinoma.

Premalignant lesions of vulva:
Premalignant lesions are those problems of vulva if not treated properly will lead to cancer vulva. There are two types of premalignant lesions of vulva. They are

1. Vulvar intra epithelial neoplasia (VIN) occurs in younger women (30-40yrs.) due to HPV infection. These women may or may not have any symptoms. Common symptoms with which a woman can present are itching, soreness burning, and pain in the external genitalia, swelling, ulcer or altered texture of the vulvar skin. Urinary symptoms like burning micturition may be present. Infrequently may experience painful and difficult coitus.(dyspareunia)
2. **Vulvar dystrophy disease (non neoplastic epithelial disorders):**

   It is a chronic, progressive, inflammatory, non neoplastic epithelial disease. It affects the labial, perineal, and perianal areas. 

   This occurs usually in women with advanced age. This condition as against VIN is not caused by HPV virus. Exact cause is not known but multifactorial origin is proposed including genetic, autoimmune, chronic irritation and hormone deficiency. 

   Woman presents with progressive symptoms of itching, burning, dyspareunia, burning micturition and difficulty in defecation. Examination reveals a patchy, thin, glistening, ivory-white area and leads to atrophy of vulvar skin and closure of vaginal orifice. These women experience psychological impact.

   **Management of Premalignant Lesions:**

   Early diagnosis and proper treatment is very important to avert the progression of the lesions and chance of vulvar carcinoma. 

   **Women who have the above said symptoms should visit their gynaecologist for proper evaluation and appropriate treatment to prevent major problems.** 

   Early treatment includes local applications or excision of the lesions which will not disfigure the vulva.

**Vulvar cancer:**

Symptoms: early stage disease may not have any symptom. As the disease progresses woman develops growth or an ulcer on the vulva, associated with itching, burning, foul smelling discharge or bleeding; in advanced stages will present with groin swellings.

**Management:**

When a woman presents with an obvious growth or ulcer, a biopsy (a piece of tissue is removed) is to be done to confirm the diagnosis of vulvar cancer.

Once the diagnosis is confirmed, treatment is planned depending on the stage of the disease. Surgery is the main stay of the treatment. Extent of the surgery depends on the stage of the disease and involvement of groin lymph nodes. Surgery may involve wide local excision of the tumor in early stage to removal of the whole vulvar tissues (radical surgery) and groin lymph nodes in advanced stage disease.
Alternate treatment:
Chemotherapy.
Radiotherapy.
Alternate therapies are used as an adjunct to surgery or as primary modality of treatment in women whose performance status is poor, where surgery is contraindicated or tumor is inoperable or recurrent tumor after primary surgical treatment.
Prognosis depends on stage of the disease and the involvement of lymph nodes. In early stage disease with proper treatment, 5 yr. survival of the patient is 90-100%, and in advanced stage the survival drops to 40-25%.

Complications:
Complications of surgery.
Wound breakdown.
Secondary wound infection.
Psychological issues.

Can vulvar cancer be prevented?
Yes it can be prevented.

Measures to prevent vulvar cancer:
HPV vaccination (nonvalent) for girls before the age of 15yrs.
Smoking should be avoided.
To avoid multiple sexual partners.
To practice personal hygiene.

Self-vulvar examination:
It is very important that every woman must know to report early if she has symptoms like itching, burning or ulcer and change in vulvar skin texture, color or feel.
Routine gynaecological examination by the medical staff should include detailed vulvar examination.

The most important tool to prevent vulvar cancer is awareness regarding the premalignant and the malignant lesions of vulva among public and the doctors.
भारतीय महिलाओं में सर्वाइकल (गर्भाशय का मुंह) कैंसर एक बड़ी बीमारी है। इसे सामान्य बोलचाल में बच्चेदानी के मुंह का कैंसर कहा जाता है। ज्यादातर मामलों में शुरुआत में इसकी पहचान नहीं हो पाती और स्थिति बिगड़ने पर यह मौत का कारण बनता है। वैसे तो इसके कई कारण होते हैं, लेकिन हूमन पेपिलोमा वायरस से होने वाला शारीरिक संक्रमण इसकी प्रमुख बजार है। अचानक बाल यह है कि इससे बचने के लिए टीके आ चुके हैं, जो इसकी रोकथाम में अहम भूमिका निभाते हैं।

क्या है सर्वाइकल कैंसर -
सर्वाइकल कैंसर के शुरुआती दिनों में कोई लक्षण नहीं दिखता। कुछ लक्षण ऐसे हैं जिनके होने पर विशेषज्ञ से परम्परा लेना चाहिए। ये लक्षण माहवारी की अनियमितता, मासिक धर्म के दिनों के अलावा भी रक्त आना, ज्यादा दिनों तक ज्यादा माता में माहवारी आना, रजोनिवृत्ति के बाद भी लगातार पीरियड आना, शारीरिक संबंध के समय दर्द व रक्त साल होना, गंदा पानी आना, पेट के नीचे और कमर में दर्द बने रहना आदि है।

कब है कारगर -
युवावस्था में कभी भी महिलाएं टीके लगवा सकती हैं। टीके शारीरिक संबंध स्थापित होने से पहले लगा दिया जाए तो ज्यादा कारगर हैं, क्योंकि इस वायरस का संक्रमण शारीरिक संबंध के दौरान होता है। टीके 9 से 11 वर्ष की उम्र में लगा दिया जाए तो आगे इस बीमारी के खतरे से बचा जा सकता है। इस वायरस का संक्रमण होने के बाद टीके बेअसर रहते हैं। इसका मतलब यह है कि टीके रोकथाम में तो सहायक हैं, लेकिन रोग को टीक करने में नहीं।

विशेषज्ञ की सलाह है -
सर्वाइकल कैंसर से बचने के लिए गार्डसिल और सर्वैचिक्स दो वैक्सीन हैं। इनमें से कोई भी टीका लगवा सकती है। टीके की पहली दोज के एक माह बाद दूसरी व छह माह बाद तीसरी दोज दी जाती है। दोजों को स्त्री रोग विशेषज्ञ की देखरेख में लगाना चाहिए। गर्भवती होने पर व ज्यादा दिनों में इन्हें नहीं लगाया जाना चाहिए। कीमत ज्यादा -इन टीकों के लगभग बारह साल पहले आने के बावजूद इनके बारे में ज्यादा लोगों को जानकारी नहीं है। टीके कम लगाने की वजह इसकी कीमत भी है, क्योंकि एक टीके का बाजार मूल्य करीब ढाई से तीन हजार रूपए है।
काल्पोस्कोपी

डॉ. रंजू अग्रवाल

हमारे भारत में एक मिनट में करीब 200 महिलाओं की मृत्यु गर्भाशय ग्रीवा के केंसर से होती है, हर आठ मिनट पर एक ओस्ट की मृत्यु का कारण गर्भाशय ग्रीवा का केंसर है। पूरी दुंिया में करीब 5 लाख नए केंसर हर साल जुड़ते हैं, पांचवा हिस्सा भारत में करीब एक लाख। परेशानी की बात यह है कि यह तब पता चलता है जब बीमारी फैल चुकी होती है क्योंकि शुरुआती दिनों में इसके कोई खास लक्षण नहीं होते। खुशी की बात यह है कि यह जाना जा चुका है यह एक एच पी वी नामक वाइरस से होते हैं और यही एक ऐसा केंसर है जिसे होने से रोका जा सकता है क्यों कि इसके समय होने से लेकर केंसर तक यह एक लम्बी प्रक्रिया से गुजरता है, 6 से 10 साल।

केंसर बनने से पहले के चरण होते हैं जिन्हें प्रारम्भिक चरण या प्रीकेंसर रेटेक्स कहते हैं।

यह काल्पोस्कोपी उसी चरणों (steps) का पता लगाने के लिए है ताकि केंसर को प्रारम्भिक चरणों में ही जोखिम जा सके और उपचार निदान व उपचार किया जा सके। 30 साल से 65 साल के हर ओस्ट को हर पांच साल में गर्भाशय ग्रीवा की जाँच डॉक्टर के पास जा करानी चाहिए।

यह जाँच कई तरीकों से होती हैं, पेप स्फीयर, VIA, VILI, HPV DNA Test आदि। अब प्रायः उठता है कि काल्पोस्कोपी किसे करानी चाहिए।

► जिसकी पेपस्फीयर जाँच असामान्य है।
► काफी इलाज के बाद भी योनी का संक्रमण नहीं न हो।
► VIA और VILI जिनका पोजिटिव आए।
► HPV DNA Test पोजिटिव आए।
► जिनको असामान्य रस्तस्त्राव, रजोनिवृति के बाद रस्तस्त्राव, सम्भोग के बाद रस्तस्त्राव है।
► CIN (प्रारम्भिक रेटेक्स) के इलाज के लिए
► CIN के इलाज के बाद हालत देखने के लिए।

Vagina (योनी) व Vulva के केंसर की जाँच के लिए काल्पोस्कोपी एक बाहिरी प्रक्रिया है।

इसमें भर्ती नहीं होना पड़ता। करीब 10 से 20 मिनट का समय लगता है। ममूली असहजता महसूस हो सकती है। कोई दर्द नहीं होता। मरीज को कम्प्यूटर पर पूरी प्रक्रिया दिखाई देती है। एक ही बार में असामान्य क्षेत्र का पता लगाना, व जाँच के लिए टुकड़ा लेना व इलाज करना तीनों काम सम्भव है। इस पूरी प्रक्रिया के लिए कोई बेहोशी की जरूरत नहीं होती।
Cancer prevention vaccines are given to healthy individuals to protect them from development of certain cancers.

There are two types of cancer prevention vaccines approved by US FDA:

**HPV VACCINE**
- This vaccine protects against Human Papilloma Virus (HPV). If this virus is long lasting in our body it can cause some types of cancer.
- The FDA has approved HPV vaccine to prevent:
  - Cervical, Vaginal, vulval cancer.
  - Anal cancer
  - Genital warts.
- HPV can also cause other cancers like oral cancers but vaccine is not approved for it.

**HEPATITIS B VACCINE**
- This vaccine protects against hepatitis B virus infection. If this virus is last long in our body it can cause Liver cancer.
- Here we will be mainly talking about HPV VACCINE, for Cancer cervix prevention.
- Cervix is the mouth of uterus. Cervical cancer is most common cancer in Indian Women ranking 2nd after breast cancer. It is caused by prolonged and persistent infection of cervix by HUMAN PAPILOMA VIRUS.

**HUMAN PAPILOMA VIRUS**
- It is a sexually transmitted infection, which infects nearly all sexually active women.
- There are nearly 200 types of HPV virus, over 40 can infect the anogenital area.
- It can cause Genital Warts, which are not cancerous but quite bothersome.
- It can cause pre cancerous lesions and cancers in the cervix, vagina and vulva.
- There is a very slow progression of this disease and it may take decades for it to develop into cancer.

In majority of women this infection resolves on its own by auto immune system. But still there is high prevalence of this cancer in our country. It also infects the anogenital area of male population. There is close association of increased sexual activity and high risk of HPV infection.
Good NEWS about this cancer is that now vaccine is available to safely prevent initial HPV infection and subsequently HPV associated diseases such as warts and cervical cancers.

**Two types of vaccines are available in India against HPV infection, for cervical cancer** -
- Bivalent HPV vaccine - targets HPV types 16 & 18 CERVARIX VACCINE.
- Quadrivalent HPV vaccine – targets types 6, 11, 16 & 18 GARDASIL VACCINE.
- 9 valent vaccine -not yet available In India.

It is recommended that both males and females get vaccinated. Not only is there a direct benefit to males in being vaccinated, it also promotes Herd Immunity.

These vaccines do not treat or accelerate the clearance of pre-existing HPV infection. Age Recommendations ...

**WHEN TO GIVE the Vaccine ?**
- Females 11 to 12 years.
- Can be given in females as young as 9 yrs.
- Catch up vaccination in females age 13 to 26 yrs.
- Not recommended in females older than 26 yrs.
- Reasonable to give women older than 26 yrs. Who have not been sexually active or who have been monogamous, and may have a future risk of HPV exposure.

**In Males :**
- Recommended age for vaccination is 11 to 12 years
- Catch up vaccination from 13 to 21 years.

**Vaccination Schedule**
- Age less than 15 yrs.--- 2 doses only 0 and 6 months.
- Age 15 yrs or more------3 doses 0, 1-2, and 6 months.
- Can be given together with other age appropriate vaccines like hepatitis B vaccine at a different site.
- Side effects are very low, it is a very safe vaccine.
- It is important to realise that these vaccines will not give 100% protection as there are very less uncommon types of HPV strains for which we don't have vaccine protection.
- So HPV vaccine has not changed the cancer screening guidelines.

We must get ourselves screened regularly for cervical cancer as guided by our Doctor. By Aggressive screening and vaccination of all Adolescent population, both boys and girls we may be able to eradicate the disease.
एंडोमीट्रियल कैन्सर या बच्चेदानी का कैन्सर गर्भाशायी यानी बच्चेदानी की लाइन का कैन्सर है। यह बच्चेदानी की ग्रीवा या मुख के कैन्सर, जिसका सर्विकल कैन्सर भी कहते हैं, से बहुत अलग है। एंडोमीट्रियल कैन्सर साधारण रूप से 50 वर्ष या अधिक की उम्र में पाया जाता है।

रिस्क फैक्टर्ज़:
- महिलाओं में oestrogen नाम के हॉर्मोन की अधिकता, PCOD अथवा एस्ट्रोजेन सिक्रीट करने वाले tumours के होने पर एंडोमीट्रियल कैन्सर होने की संभावना बढ़ जाती है।
- बहुत जलदी महावारी शुरू होने वाली लड़कियों या late मीनोपॉज वाली महिलाओं में भी संभावना बढ़ जाती है।
- इन्फ़र्टिसीटी या बाप्पन की बीमारी।
- बढ़ती उम्र विशेषक मीनोपॉज के समय या उसके बाद में।
- मोटापा, डाइबिटीज तथा ऊपच रक्तचाप।
- यदि मीनोपॉज की स्थिति में हॉर्मोन रिप्लेसमेंट थेरपी के रूप में एस्ट्रोजेन को बिना ध्यान रखे (बिना प्रोजेस्टरोल के) दिया जाए।
- कुछ दवाइयाँ जैसे की टेम्पोरिफेन, जिसका उपयोग ब्रेस्ट कैन्सर में किया जाता है, भी एंडोमीट्रियल कैन्सर को बढावा देते हैं।
- कुछ सिंड्रोम तथा आनुवंशिक कारण।

इसलिए बहुत ज़रूरी है कि आप किसी भी दवाई का सेवन, बिना डॉक्टर की सलाह के ना करें।

कैसे पहचाने:
- मेनस्ट्रूअल या माहवारी में बदलाव, ज्यादा खून निकलना, या मेनस्ट्रूअल साइकल में बदलाव या फिर बीच बीच में व्लीबिंग, जिसको आम बोलचाल के भाषा में छीटा लगाना भी कहते हैं।
- स्त्राव या डिस्चयर्ज जो कि ब्लड स्टेन से सुक्त होता है (सर्विकल कैन्सर में ये स्त्राव बदलबुदा होता है लेकिन एंडोमीट्रियल कैन्सर में इतनी बदबू नहीं रहती।
- पेट के नीचे के हिस्से से अर्धे में दर्द रहना।
कैसे डाइग्नोस किया जाता है?

- एंडोमिट्रियल कैन्सर है कि नहीं, ये जानने के लिए गर्भाशय के अंदर से एंडोमिट्रियम का सैम्पल लिया जाता है। यह एक छोटे सजिलक ऑपरेशन एंडोमिट्रियल सैम्प्लिंग या डी-एंड-सी द्वारा किया जाता है। इसमें ज़रूरत होने पर हस्ताक्षर सिद्धांत या बेहोशी की दवाई का उपयोग किया जा सकता है।

- एंडोमिट्रियम सैम्पल की जाँच पेथोलॉजिस्ट द्वारा की जाती है। जिससे पता चलता है कि एंडोमिट्रियल कैन्सर है कि नहीं।

- सोनोग्राफी, एम-आर-आई स्कैन द्वारा एंडोमिट्रियल कैन्सर का कितना फैला है जाना जाता है।

- रिस्क के हिसाब से ग्रेडिंग एवं स्टेजिंग की जाती है। ये 1 से 4 तक दी जाती है।

एंडोमिट्रियल कैन्सर का इलाज:

- एंडोमिट्रियल कैन्सर का पता चलने पर साधरण रूप से डॉक्टर बच्चेदानी निकालने की सलाह देते हैं। परंतु इसमें ध्यान देने की बात है कि कैन्सर की सेल्ज को पूरी तरह से निकालना बहुत ज़रूरी है।

- यह ऑपरेशन एक विशेष रूप से प्रशिक्षित चिकित्सक द्वारा करना ज़रूरी है जो कि बच्चेदानी निकालने के साथ कैन्सर के फैलने का पता कर सके, सिम्फ़ नोइज़, ओमेटम आदि की से म्युटिंग कर सके एवं ज़रूरत मुट्याबिक निकाल सके।

- कैन्सर की स्टेज के मुट्याबिक मरीज को कीमोथेरपी अथवा रेडियोथेरपी का कोर्स दिया जाता है।

कुछ महत्वपूर्ण बातें:

- एंडोमिट्रियल कैन्सर की एक अंधे बात है कि सत्रिकल कैन्सर के मुकाबले यह धीरे मंडला है एवं पूरा इलाज लेने के बाद मरीज कैन्सर नकत्म तम्बी ज़िंदगी जीते हैं।

- एक महत्वपूर्ण जिज्ञासा उठती है कि क्या एंडोमिट्रियल कैन्सर के लिये वैक्सीन उपलब्ध है? एंडोमिट्रियल कैन्सर से बचाव के लिये कोई वैक्सीन उपलब्ध नहीं है (जबकि कैन्सर सविकल से बचाव के लिये वैक्सीन उपलब्ध है)

- एंडोमिट्रियल कैन्सर से बचाव के लिये ज़रूरी है, खान पान तथा व्यायाम पर ध्यान दिया जाये, शुगर, उच्च रक्तचाप तथा डाइबिटीज जैसी बीमारियों से बचा जाए एवं कोई भी तकलीफ़ होने पर स्पेशलिस्ट डॉक्टर की सलाह से इलाज़ लिया जावे।
Most women with endometriosis never develop cancer. Evidence suggests that overall likelihood of developing cancer is very low in such patients; however, there are studies which show that there may be an increased risk of certain cancers especially Ovarian cancer and borderline ovarian tumour in sub-fertile women. It is estimated that there may be about three to eight fold rise in the cases of ovarian malignancies in these patients.

Malignant transformation of ovarian endometriosis was reported way back in 1925 by John Sampson. "Atypical endometriosis is reported to possess precancerous potential attributed to premalignant changes characterized by cytological atypia and architecture proliferation. However, atypical endometriosis is considered as a reactive change to inflammation. Mild dysplasia of the uterine cervix is considered a result of inflammation, and mild atypical endometriosis may be reactive to local severe inflammation and/or superficial ulceration with regenerative activity."

Cancer mechanism in endometriosis is not well established but there are two putative shared mechanism between endometriosis and cancer:

**Oestrogen stimulation**: there is over expression of oestrogen receptor \( \beta \) (ERB) in both endometriosis and oestrogen dependent cancer like Ca Breast and Ca Endometrium

**Chronic Inflammation**: there are over production of prostaglandins (E2), cytokines and chemokines. The Cox2 enzyme is the rate limiting enzyme in the production of PGE2, and this particular enzyme is found deficient in both endometriosis as well as Ca Endometrium that leads to over production of PGE2.

**Evidences**

- Tumour Marker Ca 125 is found raised in both Ca Ovary and Endometriosis
- Women who underwent unilateral oophorectomy for endometriosis had a reduced rate of development of ovarian cancer compared to control subject.
- Ovarian cancer was significantly less likely to develop in women who underwent radical surgical excision of visible endometriosis.

**Risk Factors**

- Long standing endometriosis
- Large size lesion (>9cm)
- Ovarian endometriosis
- HRT
- Obesity
- Incomplete resection

**Cancer associated with endometriosis are:**

- Ovarian cancer – 62%
- Endometrial Cancer
- Breast Cancer
- Cervical
- Vaginal
- Vulval
- Fallopian Tube Cancer

It is estimated that ovarian endometriosis has a 0.7% malignant transformation risk and 0.42% greater risk for developing ovarian cancer.

Women with endometriosis show higher risk of EAOC, especially in cases with surgical or pathologically proven cases of endometriosis and most common histological pattern endometrioid type of clear cell carcinoma. Thus, we should be aware, but not worried about the effects of endometriosis on your ovarian cancer risk.
Be alert, be safe!

Know the risk factors for ovarian cancer and what precautions one can take.....

Introduction:
The ovary is a paired internal reproductive organ in the females. Its main function are: To produce an egg every month and thus aid in conception. To produce female reproductive hormones especially estrogen, progesterone and a little bit of testosterone.

Ovaries consist of sex cells which can be differentiated into various types of cells so when an ovarian tumor forms it can sometimes consist of variety of tissues.

Symptoms:
No symptoms or very vague symptoms in the initial stages like heaviness, bloating sensation in the abdomen, persistent dyspepsia etc.

Pressure symptoms:
With enlargement, the tumor presses on the surrounding organs especially urinary bladder and bowel, This gives rise to disturbed bladder and bowel functions like difficulty in passing urine and motion, recurrent-urinary tract infections etc.

Abdominal enlargement or lump: Abdominal enlargement can be seen when tumor grows very large (12-15cm) or when fluid fills the abdominal cavity (ascites). Sometimes, a solid tumor can present as a lump.

Surgical emergency: Rarely, this situation is encountered in an ovarian cancer. When it occurs, it can be because of twisting or bursting of the tumor inside the abdomen. Abnormal uterine bleeding is not a common symptom of ovarian cancer.

Diagnosis
Early diagnosis and treatment is very important for good curative results but it is also a big challenge because of the vague and late appearing symptoms of the disease.
A transabdominal and transvaginal ultrasound (with color doppler) helps to document the presence of the tumour and to get an idea about its nature. CT scan / MRI can help in knowing the extent of spread of disease. Certain blood tests called tumor markers can help in diagnosing and following the disease. Whenever fluid is present inside the abdominal cavity or around the lungs it should be collected and tested in the laboratory for presence of cancer cells.

**Treatment**

After preliminary diagnosis and evaluation, a treatment strategy is planned according to the stage of the disease.

In early stages surgery is the primary treatment. Apart from removal of the tumor, surgery includes proper staging procedures best done by an expert in the field of Gynaec Oncology.

Depending upon the final biopsy report, decision about the post operative chemotherapy is taken, In advanced disease either extensive surgery followed by chemotherapy is the mode of treatment or chemotherapy can be given in parts before and after the surgery.

**Outcome**

The outcome of the disease is measured in terms of five year survival. As the disease advances 95% in stage I and it can falls to less than 20% in stage IV. Therefore, early diagnosis and treatment are very important. For this awareness about the disease and obtaining timely expert opinion and treatment are necessary.

As if now no screening strategy has been defined for early detection of ovarian cancer. However yearly gynecological examination for all adult females even in the absence of symptoms can prove very useful. Even after successful treatment the patient should be closely followed. It is very essential to screen for other malignancies during follow up visits and to maintain a good quality of life as far as possible.
Fallopian tube cancer starts in the fallopian tubes (FT). It is part of the reproductive system of women, which connects the ovaries to their uterus. Normally each month, an ovary releases one egg into the fallopian tube. The egg either fertilize by sperm and culminates into pregnancy, or it passes out of the body during a menstrual period when fertilization does not happen.

Fallopian tube cancer is very rare, only about 1% of all reproductive cancers in women start in the fallopian tubes.

❖ Causes

The Exact cause is unknown. Women have lower chances of FT cancer who has
- Given birth • Breastfed a child • Used birth control pills
- No family history of breast cancer

Fallopian tube cancer can start at any age, but it is most common in women who are in their 50’s or 60’s.

❖ Symptoms

There are no definite signs but may present with:
- Bleeding from the vagina in post menopause
- White, clear, or pink discharge from the vagina
- Pain or pressure in lower abdomen
- Lump or swelling in the pelvis

Various conditions cause above symptoms and is advised to consult your doctor to rule out possibilities.

❖ Tests required

- Pelvic exam • Pap smear and CA125 • Ultrasound TVS
  - CT • MRI • Biopsy

❖ Treatment

- Surgery is the main treatment for fallopian tube cancer. The type of surgery required depends on the stage of cancer, size and the spread. Total hysterectomy is the surgery, which is removal of uterus, ovaries and fallopian tubes.
- Chemotherapy
- Radiation therapy
- Palliative care is another important part of treating the cancer.

If anyone plans to have children, advised to consult the doctor about the options. Doctor may be able to take steps to preserve fertility and may freeze eggs or embryos before the surgery to plan pregnancy in future.
INTRODUCTION

Breasts play an important role in defining special functions of the female body. The texture of normal breast tissue varies from smooth to granular. Texture may also vary with the menstrual cycle and during pregnancy. Nodularity and tenderness often increase towards the end of the cycle and during menstruation. Breast tissue is usually symmetrical so always examine both and compare one to the other. It detects the majority of breast abnormalities & is potentially life-saving. Monthly examination can be done at end of menses.

Stand in front of mirror.

Inspect for-

Skin changes, Redness, Visible lumps, Nipple crusting & Symmetry.

Look for any dimpling or unusual skin changes.

There should be no visible lumps or bulges of the breast beyond the normal contour.

The skin should be of uniform in color and not have areas of redness suggesting increased blood flow.

The nipples should have no visible secretions or crusting.

Raise Arms Up—Breasts should rise evenly & watch for dimpling or retraction. This should be done standing in front of mirror.

Feel for Lumps

Raise the arm

Feel with opposite hand

It will feel like a “marble in a bag of rice”

Use the Middle of Your Fingers

Fingertips are too sensitive
(all breasts are somewhat lumpy)

Palm is too insensitive

Middle portion of fingers is just right
Then move to another location
Work your way around the breast in a clockwise fashion, using small circles of the hand as you go make sure the entire breast is felt.
After examining the first area with circular motions of your hand, move to another area and again feel for lumps, using a circular motion.
Many people find it easier to progress in a clock-wise fashion around the breast until the entire breast has been examined.

The “Tail” of the Breast
Remember that the breast is not perfectly round, but has an extension ("tail") that extends up into the armpit. It is important to examine that portion of the breast too.

Feel the Armpit
Using the same circular motions, examine the armpit, feeling for any lumps in the "tail" of the breast or any lymph nodes. Lymph nodes are normally so small they cannot be felt. If enlarged due to infection or inflammation, they grow to about the size of a pencil eraser but are long and narrow rather than round.

Try to Express Nipple Discharge
Using the thumb and fingers, squeeze the breast toward the nipple to try to express any discharge. This stripping of the milk ducts can be useful in identifying early problems with the ducts. You should squeeze not only from side to side, but also from top to bottom and at an angle. In normal breasts, you can, with effort, usually produce a drop or two of clear, milky, or slightly green-tinged discharge. Abnormal findings would be a bloody discharge, or so much discharge that it squirts across the room or consistently stains the inside of your bra.

Remember to check the other side also & an annual professional exam by a physician or other qualified health professional is important. At that time, you can ask questions about findings that you didn't consider abnormal but were nonetheless troubling.
Mammography is the final part of routine breast screening & is advised
Age 40-50: Every other year
Over Age 50: Annually
 Might be more often in special circumstances such as breast problems or family history of breast cancer.

Conclusion
If you find something in your breast...Don’t panic. About 90% of breast lumps are benign. Do see a physician or other qualified health care provider right away.
Ultrasound in CANCER diagnosis

Ultrasonography uses sound waves to produce pictures of the inside of the body. It is a non-invasive, quick and cost-effective investigation which can be done on OPD basis. It is a real time imaging procedure that is used in screening, diagnosis and staging of various cancers.

During an ultrasound imaging, a medical professional slowly glides a transducer over the patient’s skin in the area of the body being studied. The transducer produces a series of high frequency sound waves that bounce off the patient’s internal organs. The resulting echoes return to the ultrasound machine, which then converts the sound waves into two dimensional images (sonograms) that can be viewed in real time on the monitor.

An ultrasound test can also be performed endoscopically. The intensity of ultrasound echoes vary depending on the density of the tissue being evaluated. Because sound waves echo differently from fluid-filled cysts and solid masses, an ultrasound can reveal tumors that may be cancerous. It also helps in detection of their lymphatic spread by showing the architectural changes in the lymph nodes. Several modes of ultrasound like amplitude (A), brightness (B), motion (M), color doppler (C), duplex and harmonic modes are used in the diagnosis, treatment response evaluation and follow up of cancer.

Ultrasonography can also be used to perform ultrasonography-guided FNAC and biopsies to confirm the diagnosis of cancer.
Breast cancer is the second most common cancer amongst women. Initial symptoms of breast cancer may be a lump, changes in shape, dimpling of skin, nipple discharge, patchy skin and/or swollen lymph-nodes.

Outcome of breast cancer depends on its type and stage of disease, so that the early detection and screening in susceptible individuals (otherwise healthy women) and in women with positive family history may achieve early diagnosis and thus better prognosis.

Various procedures for screening are:

1. Ultrasonography
2. Mammography
3. MRI

**ULTRASONOGRAPHY V/S MAMMOGRAPHY V/S MRI**

All are used to detect cancer breast. All procedures have their own distinct purposes, indication, advantages and disadvantages.

**ULTRASONOGRAPHY**

Used in patients of less than 40 years of age. It is useful as at this stage breast tissue is very dense. So ultrasonography is better than mammography. If there is confusion in the diagnosis of the lump than MRI can be done.

**MAMMOGRAPHY:**

Is the plain X-Ray of soft tissues of breast. In this procedure person stands in front of X-Ray machine and X-Ray technician places breast between two plastic plates and press it to make breast flat for a clear picture. Two films are taken -

1. Cranio-caudal (from above-downward)
2. Medio-lateral (from side to side)

Dose of radiation is 0.1 Gy (very low so that it is safe and effective)

It can be used in

1. Screening mammography- usually done after, 40 yrs. Rarely done before 35 yrs of age, except in case of strong family history.
2. Diagnostic mammography- to evaluate existing cancer

**MAGNETIC RESONANCE IMAGING (MRI)** MRI is a type of scan that uses a strong magnetic field and radio-waves to produce detailed image of internal organs and soft tissues. MRI scanner is a large tube that contains a powerful magnet; and the patient lies inside the tube during scan. Mammography is considered a standard test for breast cancer screening programme, however MRI is used in women who are at high risk. In mammography, X-Ray radiation are used, which penetrate the breast tissue and record difference in tissue density. Tumorous tissues are more dense than normal tissues.
**Procedure** - patient is placed on a table that slides inside the tube with high magnetic field and injectable contrast is given (usually Gadolinium) to enhance the image resolution to 10-100 folds.

**Time consumption** -
- Mammography - takes 30-60 mins
- MRI - takes 45-60 mins
Mammography may cause discomfort to the patient.

**Test sensitivity** -
- Mammography - has approximately 87% sensitivity
- MRI - due to high resolution and better visualization of mass in dense breast specificity is close to 93%

**False positive results** -
More false positive results are with MRI, because MRI will enhance both benign as well as malignant tissues. Anterior tumor tissues are often seen with little differentiation in their characteristics. While mammography has better specificity than MRI about 75% because it can detect calcification (characteristic deposition of calcium around a malignant growth), that can help differentiate between benign and malignant growth.

**Cost** - mammography is cheaper than MRI

**False negative results** -
About 5% breast tumors are missed in mammographic screening. MRI however is useful in detecting very small breast lesions.

**Special indication** -
MRI is useful in women with breast implants.
In young females with dense breast tissues
In pregnant females, no need for any special care to be taken during MRI in young women as there is no radiation exposure risk.

**Contraindication to MRI** -
In patients with implants such as pacemaker, cochlear implant, or internal metallic objects (like surgical clips, screws, plates, wires etc)
Permanent tattoos, permanent eye liners, body piercings.
Mammography is the screening modality of choice in such conditions.

Any health screening tool should fulfill at least 3 criteria:

- **Reliability**
- **Availability**
- **Affordability**

Mammography fulfills all three criteria for mass screening; however for women at high risk of developing breast cancer and in younger women MRI is the modality of choice for screening.
Carcinoma has become an important public health problem. Breast and Gynecological CA are among most common CA in women. However with the help of good screening methods like early biopsy we can reduce its incidences and improve prognosis and clinical outcome.

**What is Biopsy?**

Removal of tissue from a living body for microscopic diagnostic examination. It is used to verify presence and nature of neoplastic disease.

**CERVICAL BIOPSY**

1. **PUNCH BIOPSY** - OPD procedure without anesthesia. It can also be done colposcopic directed or by punch biopsy forceps from suspected area.
2. **WEDGE BIOPSY** - When definite growth visible, a wedge is taken from the margin of normal and abnormal area.
3. **RING BIOPSY** - Whole of Squama Columnar Junction is excised with special knife to detect CIN or early CA.
4. **CONE BIOPSY** - Both diagnostic and therapeutic purposes. Removal of cone of cervix which includes entire SCJ, stroma with glands and endocervical mucous membrane.

**COMPLICATIONS**

- Cervical Stenosis
- Secondary Hemorrhage
- Decreased cervical mucous
- Cervical Incompetence

**BREAST BIOPSY**

**Indications** - Any suspicious lump lesion in breast like –
- Fibroadenoma
- Fibro adenosis
- Breast abscess
- Breast Cancer

**Breast Cyst**

**TYPES OF BIOPSY**

1. **NEEDLE BIOPSY**

   - Fine Needle Aspiration Cytology (FNAC)
   - It is a quick and OPD procedure.
   - A thin hollow needle is used to remove sample of tissue.
• Core Needle Biopsy (True Cut Biopsy)
  A large needle is inserted through a small incision and small core of tissue is removed under ultrasound guidance.

2. OPEN BIOPSY
  • Incisional
  Under local anaesthesia dissect specimen between normal and abnormal tissue.
  • Excisional
  Removal of entire lesion with 2-3mm perimeter of normal tissue.

*Note- Open Biopsy is more accurate than needle biopsy.

ENDOMETRIAL BIOPSY

INDICATION
  Determine cause of AUB
  Assessment of hormonal response to endometrium
  Status of endometrium in infertile patient.
  Carcinoma screening
  Thickened endometrium in ultrasound in post menopausal patient.

Types
  D&C and endometrial biopsy.
  Hysteroscopy directed biopsy.
  (Pipelle) Endosuction catheter biopsy.

COMPLICATIONS:
  • Infection
  • Bleeding
  • Perforation
What is genetic counseling?

You must have heard that Oscar winning actress Angelina Jolie found out through genetic testing that she is at high risk for breast cancer. She ultimately decided to undergo a prophylactic bilateral mastectomy to reduce her risk of developing the disease. Genetic counseling is a process by which patients or relatives, at risk of an inherited disorder such as cancer are advised of the consequences and nature of the disorder, the probability of developing or transmitting it and opting all options open to them in management and family planning in order to prevent or avoid it.

You may be surprised to learn that only about 5% to 10% of all cancers are linked to genes that you're born with. Family risk can also include shared lifestyle habits or environment, as well as genes handed down from parent to child. For this reason, most people don't need genetic testing. It's usually done when certain types of cancer run in a family and a problem with a gene is thought to be the cause. Cancer genetic counseling is a communication process between a health care professional and an individual regarding the cancer occurrence and risk in his/ her family.

Who should go for cancer genetic counseling?

1. Early age of onset (e.g. <50 yrs for breast and uterine cancer)
2. Multiple family members on the same side of the pedigree with the same cancer.
3. Clustering of cancers in the family known to be caused by a single mutation (e.g. breast/ovarian/pancreatic; colon/uterine/ovarian; colon cancer/ polyps/desmoid tumor/osteomas)
4. Multiple primary cancers in one individual (e.g. breast / ovarian cancer; colon/uterine cancer)
5. Bilateral disease (e.g. cancer in both breasts)
6. Ethnicity (e.g. Jewish ancestry for breast/ovarian cancer syndromes)
7. Unusual presentation of cancer/tumor (e.g. breast cancer in male; medullary thyroid cancer; retinoblastoma)
8. Pathology e.g. triple negative ER/PR/HER-2 breast cancer in young individuals)
Components of genetic counseling

1. Diagnostic and clinical aspects
   a. Choosing the right test to identify the gene involved
   b. Choosing the right lab in terms of affordability, technology used and turn around time.

2. Documentation of family and pedigree information

3. Recognition of inheritance patterns and risk estimation: mutation carriers can be offered earlier and more aggressive surveillance, chemo prevention and/or prophylactic surgery.

   4. Communication and empathy with those seen

   1. Information on available options and further measures
   2. Support in decision making and for decisions made

Issues in cancer genetic counseling

1. Psychosocial issues: genetic counseling becomes quite difficult for some individuals who are not only frightened by their own risk but also reliving painful experiences associated with cancer of loved ones. As per Holland et al 2001, the individual fears from the 6 “D’s” namely Discomfort, Dependency, Disfigurement, Disability, Disruption and Death.

2. Insurance and discrimination issues: the fear of health discrimination by both patients and providers is one of the most common concerns. Health care providers should confidently reassure their patients that genetic counseling and testing will not put them at risk of losing group or individual health insurance.

   1. Reproductive issues: reproductive technology in the form of pre implantation genetic diagnosis, prenatal testing or sperm sorting are options for men and women with a hereditary cancer syndrome. If a BRCA 2 carrier is considering having a child, it is important to assess the spouse’s risk of also carrying BRCA 2 mutation.
Skin cancer is an abnormal growth of skin cells (keratinocytes and/or melanocytes). The incidence of skin cancers is increasing day by day not only in the west but now also in Indian population. Sunlight is the most important factor contributing to skin cancer there by highlighting the importance of regular usage of sunscreens!

The degree of solar damage depends on:

- The patient’s skin types (colour of skin). The cumulative exposure to uv light
- Intensity of Exposure. The age at exposure in general, fair skinned individuals who burn and develop brown spots (freckles) easily are at a higher risk!

The three major kinds are Basal cell carcinoma, squamous cell carcinoma and melanoma.

**BASAL CELL CARCINOMA**
- It is the most common malignant tumour of the skin.
- Occurs commonly on face (inner canthus, tip of nose, ear lobe)
- Slow growing and painless.
- Dermatoscopy can help identify the lesion in early

**SQUAMOUS CELL CARCINOMA**
- It is a locally invasive carcinoma of skin.
- Most common site is lower lip.

**MELANOMAS**
- These are malignant tumours of the skin which have potential to spread to other body sites.
- They are fatal if not properly treated at an early stage.
- Moles as small as a 1mm have been recorded as melanomas.
- Sun exposure is the most common implicated factor for melanoma.

**WHEN SHOULD BE CONCERNED!**

**SKIN LESIONS:** A new mole, unusual growth, bump, sore, scaly patch, or dark spot develops and doesn’t go away. Increased growth Change in colour especially darkening, Change in shape, Itching or bleeding, Uneven distribution of colours, Irregular outline, Screening for melanoma.
**DERMATOSCOPY** is a non-invasive technique for early detection of melanoma. An yearly screening, especially for fair skinned people, of all their moles can help in early detection of melanomas.

**PREVENTION**

Seek the shade, especially between 10 AM and 4 PM. Don’t get sunburned. Avoid tanning, and never use UV tanning beds. Cover up with clothing, including a broad-brimmed hat and UV-blocking sunglasses.

Use a broad-spectrum (UVA/UVB) sunscreen with an SPF of 40-50 every day. Use a water-resistant, broad-spectrum (UVA/UVB) sunscreens for swimming and water sports. Apply 1 ounce (2 tablespoons) of sunscreen to your entire body 30 minutes before going outside. Reapply every two hours or after swimming or excessive sweating. Use sunscreen on babies over the age of six months.

Examine your skin head-to-toe every month. See a dermatologist at least once a year for a professional skin exam.
What is Eye Cancer

Cancer starts when cells begin to grow out of control and crowd out the normal cells. An early diagnosis and treatment are very important in the final outcome.

**EYE CANCER**

*(A Brief Review)*

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**PRIMARY**
(Cancer starts from)

**SECONDARY**
(Cancer that spreads from other cancers in the body)

- Breast
- Lungs
- Prostate
- Melanomas

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**INTRAOCULAR**
Inside the eye ball

**INTRAORBITAL**
Tissues around the eye ball

- Retinoblastoma
- MedulLopithelioma

- Rhabdomyosarcoma
- Choroidal Melanomas
- Non Hodgkins Lymphoma

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**WHAT ARE THE FIRST SIGNS OF EYE CANCER?**

*In Children*

CAT’S EYE REFLEX – The black central colour of eye pupil changes to yellow white reflex. Easily captured in photos.

- Squint
- Bulging of one eye

*In Adults*

- Shadows, flashes of light or Wiggly lines in vision
- Blurred vision
- A dark patch in the eyes that is getting bigger
- Partial or total loss of vision
- A visible lump on the eye lid or eye that is growing in size
WHAT ARE THE RISK FACTORS

Exact cause of eye cancer is not certain. But certain changes in the DNA of genes inside cell may cause cancers (ONCOGENES).
Some of the risk factors could be..........................
Age: -Apart from childhood, people over 50 yrs are at risk. Rare after 70 yrs age.
Race: -More in white people – less common in blacks.
Gender: -Equal incidence in both sexes
Family History: -Eye cancers are known to have a genetic predisposition. So we see congenital history.

Cancers in Infants and Children.
Melanomas are known to run in families.
Mutation of genes BAP1 is known for adult cancer.
Individual History: People with pigmentation of eye or skin around the eye (naevus).
Nevi or moles in the eyes.
Multiple moles or skin growths around the eye.
Other factors: Prolonged exposure to intense sunlight or certain chemicals.

HOW DO YOU DETECT EYE CANCER:
Routine Physical examination of the eye- done periodically- specially in infants, preschool children and thereafter as required
Ultrasound
Fluorescein Angiography
Fine Needle biopsy
Cytogenetics- Gene expression profiling
While the whole world is all topsy turvy thanks to corona, my world was recently shaken up when 2 family members (who belongs to same family) were diagnosed of cancer! Anxiety and uncertainty have taken over everyone's mind. Both the person with cancer and loved ones may need to protect one another from their own emotions. Responsibility for finances, looking after the children and many other things have to be reassessed. The family may need therapy to help themselves overcome the calamity.

Parents with cancer have to decide at what point they will talk about their illness to their children. It is usually easier to talk to a child once one's own initial shock has subsided. Children of different ages react differently to a family member having cancer. They may cry or be indifferent, but they will in any case feel worried and frightened.

For parents, having a child diagnosed with cancer is a devastating experience. Seeing one's loved one go through the pain of the surgery or the ordeal of chemotherapy can be very heart breaking. Sometimes due to physical changes in the patient's appearance is a big challenge for everyone.

Open and true communication, and positivity plays a very important role for both patient and its family. The battle can be won as a team!
कैंसर रास्ता ही अपने में भयावह है। किसी भी व्यक्ति को जब यह पता चलता है कि उसे या उसके किसी प्रिय को यह बीमारी हो गयी है तब प्रथम विचार उसके मस्तिष्क में आता है कि इसका इलाज बहुत महंगा होगा। क्या में इसका खर्च उठाने के लिए सक्षम हूँ? यह प्रश्न उसे और भी परेशान कर देता है। एक तो बीमारी उपर से उसमें होने वाला खर्च, व्यक्ति पूर्णतया टूट जाता है।

यदि इस दृष्टि की धड़ी में उस व्यक्ति को पता हो कि उसके पास इलाज के लिए धनराशि है या उसने पूर्व से स्वास्थ बीमा लिया हुआ है तो यह उसके लिए बहुत ही राहत होगी। कम से कम घन के लिए उसे परेशान नहीं होना होगा। अब उस व्यक्ति को केवल यह सोचना होगा कि उसे अपना इलाज कहाँ से कराना है। इसलिए स्वास्थ बीमा बना है।

हेल्थ पॉलिसी के साथ क्रिटिकल इलनेस प्लान – हम सबकी यह सोच है कि अगर हमने एक स्वास्थ बीमा ले लिया है तो हमें कैंसर का बीमा अलग से खरीदने की क्रिया आवश्यकता है? यह सोच सही नहीं है। समझे है कि कैंसर के इलाज के इतने लंबे खर्च को साधारण बीमा कवर नहीं कर पाए। जबकि कैंसर के लिए अलग से लिया गया बीमा पूर्णरूप से सभी खर्च को कवर करता है कैंसर के बीमा का प्रीमियम बहुत कम होता है। रोगी को कैंसर होने पर तारीख का वहन बीमा कर लेती है। इसमें अगर रोगी अस्पताल में एडमिट नहीं भी हुआ है तो भी उसके इलाज का खर्च देती है।

कैंसर का बीमा लेने से टेक्स्स में लाभ (Tax benefit of cancer policy) – सभी कैंसर बीमा प्लान विशेष हेल्थ इंश्योरेंस प्लान होते हैं। इन पर सेक्शन 60(3) के तहत 30 वर्ष की आयु से कम लोग 25000 रुपये तक का टेक्स्स लाभ उठा सकते हैं। बहिष्ठ नागरिकों के लिए यह लाभ 40000 रुपये तक है। इससे तह के प्लान पर बैठे हो ऑनलाइन खरीद आए तो सकते हैं। अलग से क्रिटिकल पॉलिसी लेने से पुराने चल रहे हेल्थ प्लान पर कोई असर नहीं पड़ता है।

कैंसर से सुरक्षा के लिए कुछ पॉलिसी कम्पनी –
आई सी आई सी आई प्रू हार्ट/कैंसर प्रोटेक्ट
एस बी आई लाइफ सम्पूर्ण कैंसर सुरक्षा
एल आई सी कैंसर कवर
एर्गोन रिलीज़र आई कैंसर इंश्योरेंस प्लान
एच डी एफ सी लाइफ कैंसर कवर।
कंसर बीमा योजना सभी स्टेज के कंसर को कवर करता है। हर स्टेज पर मुवावजा प्रदान करती है।

इसके अलावा से योजनाएं माइनर स्टेज कंसर, मल्टीपल सम्बन्ध कंसर या और माइनर लाइफ कवर जेसे अतिरिक्त लाभ भी प्रदान करती है। कंसर बीमा योजना खरीदते वक्त अधिकतम कवर वाली ही पॉलिसी (योजना) खरीदनी चाहिए तथा पॉलिसी को पूर्णतः समझना चाहिए क्योंकि हर तरह के कंसर का उल्लास का तरीका अलग-अलग होता है।

भारत में कंसर के इलाज की लागत को देखते हुए 20–25 लाख रुपये का प्लान खरीदना आवश्यक होगा। कंसर बीमा योजना लेने से हमें इसका प्रतीक्षा अवधि पर अवश्य ध्यान देना चाहिए क्योंकि इस अवधि से पहले बीमा का डावा नहीं कर सकते। इसलिए ऐसी पॉलिसी खरीदनी चाहिए जिसमें प्रतीक्षा अवधि कम से कम हो। सामान्यतः अधिकतम बीमा योजनाओं की प्रतीक्षा अवधि 170 दिन से 365 दिन के बीच होती है। कंसर बीमा योजना के अंतर्गत कंसर के सभी चरणों में बीमित राशि का भुगतान किया जाता है। जो कि शुरुआती चरण में 10 से 15 फीसदी होता है तथा एडवांस स्टेज में 100 फीसदी किया जाता है।

भुगतान (Claim) – कंसर पॉलिसी लेने से हमें इसका प्रतीक्षा अवधि चाहिए कि फॉर्म में सब सत्य ही प्राप्त हो। कंसर बीमा योजना लेने से हमें इसका प्रतीक्षा अवधि देखना चाहिए। यकीन की कीमति, गारंटी या एन्ट्री किसी नहीं की आदत को ईमानदारी से भरना चाहिए। इसलिए पॉलिसी का कमेंट सेटलमेंट आसानी से होगा। अगर आपके द्वारा चयनित अस्पताल कंपनी की पेंशनिस्ट में न हो तो सम्पूर्ण बिल का भुगतान बाद में हो जाता है। परन्तु सावधान रहें कि बिल ओरिजिनल होने चाहिए।

अगर कंसर को चेक करने दे तो आपको अपना चेक कॉपी करके उसका एक इलेक्ट्रॉनिक रिक्रियॉनल किया जाएगा। अगर कंसर चेक को बैंक अकाउंट में न हो तो आप अपनी बैंक अकाउंट कॉपी कर उस कस्टमर कंसर करें।

आपके लिए यह आदेश आहे कि आप लाइफ पॉलिसी दूर करने का सहारा और सहायता का कार्य करें, इनमें सबसे आवश्यक है जागरूकता और समझदारी। धन्यादाद।
The word tax itself evokes awe, fear, and a sense of anxiety. But a basic understanding of this can transform feelings into one of joy. As we seek our rights from the state of India where do our duties lie? It’s the taxes that we pay that give us infrastructure in the form of buildings, roads, power, and water supplies. However, we are only a handful of tax-paying individuals in this huge country. No wonder the tax rates are a bit higher than the rest of the world. In India, income tax can be classified as progressive in nature. However, there are various ways of tax planning that will save the incidence of tax on individuals. As women managing home and the outside efficiently, we should have an idea of the numerous ways that we can invest in and save tax. These savings will be helping us in our growing age as well as a secure life.

**The hardest thing to understand in the world is income tax- Albert Einstein.**

So you stand in the league of people like Einstein when you feel the same.

Progressive taxation simply means that the tax liability of a person increases with an increase in their income. Apart from their income, it also depends on their age.

For the purposes of taxation, taxpayers have been classified into three broad groups—

- Individuals below 60 years of age.
- Individuals between 60 and 80 years of age (senior citizens).
- Individuals above 80 years of age (super senior citizens).

Previously, the basic tax exemption limit was segregated for male and female taxpayers in India. Women enjoyed a higher basic exemption limit when it came to tax payment on their income earned.

However, since 2012-13, this difference in basic exemption limit has been away with, and common tax slabs have been introduced for both men and women, with respect to their income and age. There are no special benefits which are only available for the female segment compared to the men folk and as a votary of not supporting reservation; this stands in my opinion is correct.

**Income Tax Exemptions for Women**

Following are some of the exemption limits applicable for income tax payment, as mentioned under Section 80 of the Income Tax Act:

- **Section 80C** - You can avail an exemption of up to ₹1.5 Lakh for your earnings from the following:
  - 5-year tax-saver fixed deposits.
  - National Savings Certificate.
  - National Pension Scheme.
  - Equity Linked Savings Scheme.

Please
Employees Provident Fund.
Senior Citizens Savings Schemes.
Sukanya Samriddhi Yojana
Investment in Mutual Funds
Payment of tuition fees for children studying upto Class XII
Contribution to 15 year PPF
LIC premiums
Any instalment towards cost of purchase construction of a residential property, etc.

Section 80CCC – Exemption on the deposited amount in insurance annuity plans. The exemption limit under this section is set at Rs.1,50,000. This is NOT in addition to Sec 80C.

Section 80TTA – An exemption of up to Rs.10,000 on interest earned from the various bank savings account.

Section 80D – Exemption on the payment of health insurance policy premium for self, spouse, dependent children, parents, etc. The limit for this exemption is set at:
- Rs.25,000 for self, spouse and dependent children
- Rs. 25,000 (for self, spouse and dependent children) + ₹25,000 for parents
- Rs. 25,000 (for self, spouse and dependent children) + up to ₹50,000 (for parents above 60 years of age)
- Up to Rs.50,000 (self, spouse and dependent children with the eldest member above 60 years of age) + up to Rs.50,000 (for parents above 60 years of age)

Every salaried woman must go for health insurance policy for a suitable amount and the ideal amount is Rs 5 lakh. It has been noticed that many individuals have health insurance policies, but of inadequate amount, say Rs 1 lakh – Rs 2 lakh, but looking at increasing bills of hospitals for treatments, it is imperative and advisable that the sum assured should be at least Rs 5 lakh.

Similarly, if the employer is providing health insurance benefits but if the extent is only Rs 1 lakh – Rs 2 lakh, then also it is advisable for salaried women to take additional health insurance policy so that the total coverage goes up to Rs 5 lakh. And also if they have dependents like children, parents, who are dependent on their income, then it is advisable to go for a family floater plan where the medical treatment of dependent parents and children is also included. Otherwise unforeseen medical expenses can finish the life-long savings. So it is very important that dependent parents and children are also covered in the health insurance policy by salaried women.

Section 80DDB allows deduction upto Rs. 40,000 and for senior citizens upto Rs. 1,00,000 for medical treatment. Section 80 EE allows deduction in respect of interest on loan for residential house property. For senior citizens who are entirely dependent on Income from other sources they are allowed a deduction U/S 57 for expenses incurred in earning such income. There are many more such deductions available apart from the major ones. But let this be a preface for larger things to come.

Please do not forget to pay taxes this year so the government can spend it on the people who don’t work as hard as you do.
"कैंसर" ....

नाम सुनते ही शरीर में एक सनसनाहट सी दौड़ जाती है। ये शब्द उस शिकंजे की अनुभूति देता है जो अगर किसी पर कस जाए तो शयद ही पूरी तरह से उसे निकलने दे । भले ही विज्ञान ने आज बहुत तरक्की कर ली है , पर फिर भी वो कैंसर के डर से मनुष्य को उबार नहीं पाया है ।

मध्यम वर्गीय तो छोड़िए रईस से रईस व्यक्ति भी अपने लाखों, करोड़ों रुपए खर्च करने के बाद भी आश्वस्त नहीं हो पाते कि वो इसके चंगुल से पूरी तरह मुक्त रह जाएगी। कारण यह है कि इस रोग का पता सामान्य तौर पर तब चलता है , जब तक ये शरीर में भयंकर तबाही मचा देता है।

राही financial impact की बात तो वो तो बहुत ही गहरा पड़ता है हर कैंसरपीडिट परिवार पर, चाहे वो मध्यम वर्गीय हो या उच्च वर्गीय। एक मध्यम वर्गीय की तो सारी बचत पूरी इस रोग से लड़ने में आहुति दिल जाती है और कहीं कहीं लोग हार कर आत्म समर्पण भी कर देते हैं, क्योंकि उनके पास कुछ नहीं बचता, शायद उम्मीद भी नहीं।

एक रईस व्यक्ति भी अपनी काफी मात्रा में संपत्ति इस दानव से लड़ने में लगाकर ज्यादा दयनीय वित्तीय अवस्था में तो नहीं पहुंचता, लेकिन चंद्र ज्यादा दिनों की एक बंधु कि तरह की जिंदगी जो बहुत से परहेजों और दवाइयों से भरी होती है, बदले में पाता है।

कुल मिलाकर कैंसर वो भूखा दानव है जिसके मुंह में जितना पैसा डाला जाए, उसकी क्षुद्र शांत नहीं होती। फाइनेशियल वो व्यक्ति को डाउन ही करता जाता है।

इसलिए सबसे जरूरी है कि हम सब शुरू से ही अपनी तनबस्ती के लिए सजग रहे। हमारा शरीर हमेशा अपने अंदर कुछ गालत होने पर इशारा जरूर करता है, हम ही उसे महसूस करने के बाद भी नज़र अंदाज़ कर देते हैं और तकलीफ़ को सहकर खुद को बड़ा सहनीय समझकर खुश होते हैं।

नहीं, थोड़ा भी कुछ असामान्य महसूस हो तो तुरंत डॉक्टर से संपर्क करे और अपने शरीर को किसी भी भयंकर खिठ्ठि में भेजने से बचे।

समय तेरे पास जब बहुत कम हो,
तो पल में सदियाँ जीने का होसला रख।
आस्था उस खुदा, ईक्सर पर रख
Palliative care is all active actions to alleviate sufferers' burden, especially those with a life-threatening illness. Active actions include relieving pain and other complaints, as well as improving the functional, psychological, social, and spiritual well-being, in order to maintain and enhance the quality of life of patients and their families.

In India, palliative care is still an emerging discipline and faces many challenges that need to be addressed, evident in the fact that a million people with cancer and other incurable diseases need pain-relieving opioids, but only 0.4% of those in need have access to them. Moreover, we see inequalities related to socioeconomic status, geography, gender, and income interfere with Government provision of healthcare. Several improvements are urgently required in 5 broad areas- Accessibility, Availability, Adequacy, Affordability, and Accountability.

Palliative care can be provided with limited resources and infrastructural support, as shown exemplarily in Kerala's Regional Community-based model. This "Neighborhood Network in Palliative Care" has more than 60 units covering a population of more than 12 million and is often stated to be the world's largest community-owned PC network.

The 2030 UN Sustainable Development Goals' Agenda and promise 'Leave no-one behind' means that governments must develop policies to cover the 40 million persons (including at least 20 million healthcare workers) who require palliative care support globally. Currently, fewer than 10% of patients who need palliative care in low and middle-income developing countries receive it.

In India, a market economy with immense global competition, pharmaceutical researchers, manufacturers, and marketers must act on the need for palliative care-based drugs and resources. Proper utilization of economics tools is paramount to efficient palliative care health infrastructure.
Hi, All

The word Survivor sounds more to me like 'a victorious Warrior', o really, I do mean it. By definition, Cancer Survivor is a person who is living with a history of cancer, from the moment of diagnosis through the remaining of his life (Def as per National Cancer Survival Foundation). 7th June this year or the first Sunday of June is marked as Cancer Survivors Day. This is just to celebrate for those who have survived & also an inspiration for those recently diagnosed. It's also gathering support for the families & an out reach to the community.

Before the word Cancer enters the very Happening life of a human being, he is partly carefree & busy in his world. The moment this notorious word creeps inside, the whole world seems to pause for a while. A gamut of emotions flows from all around. 'How, What went wrong, How can this be, & Why Me', all simultaneously haunt the soul of Cancer Patient. Needless to say, Emotions of Fear, Depression, Frustration, Pain & Uncertainty start looming like Phantom. The world that was such a Symphony of Musical orchestra suddenly becomes a Cold tunnel that barely has a light at its end.

To come in terms & then face the difficult realities is the real challenge, That makes Warrior a Survivor.

I Believe the fear about the disease can best be beaten by knowing more & more about it from your doctor & Now days, internet too helps. No need to grab all that is written, because it describes all the possibilities, just gather & pick the one that keeps your morale up. The faith 'I shall overcome' & 'I am going to beat this' should make the keel of your approach towards your fight against disease. Emotional support of family & friends is lot very important, Company of people who are lot positive in their attitudes towards life helps.
Fear of impending death is a difficult feeling to forgo but it is an opportunity to recognize people & situations that are in your way. Your fragility & your minuscule presence in the universe fills your heart with gratitude for the Supreme power above. I believe once the initial trying phase of pains & physical stress is over & by now your brain too is out of defiance that, no, it's you who is going through all this, the emotional challenges begins. I as a Survivor, I have felt a lot of change in my personality, since my perception & expectations from life has completely changed. Not only I have become more cautious about my physical health but also my emotional strength. I avoid reacting to situations & people who don't fall in line with my way. I no more expect those to change as I have started accepting those in their true spirits. I can't afford to waste my valuable days since my Goals & priorities have changed. Live & Let live has now become my Prime Motto, I try to stay Happy & possibly create Happiness as much around. I don't try changing things or situations which are unchangeable, just move ahead.

I believe the Survivors are much stronger & people with clear vision. Vision has been made brighter by The Ultimate Visionary, who has set Certain things for all of us.

I Bow to the Supreme Power in gratitude.
This is a story of my mother age 62 years now, hard core working lady, good business woman, simple yet determined. Her story fits into a proverb "मन के हार हार है, मन के जीते जीत". She was diagnosed Cancer breast at the age of 42 years. When a lady is in a stage of enjoying her life, after a period of 20 years of struggling life in settling and growing children.

Apart of physical appearance which started with hair fall after each chemotherapy and one breast removed (which she hided by putting soft cotton cloth); psychological impart of fear, money used in treatment and further prognosis of the disease devastated the routine of family; but her strong will and determination made her pass all the mental and physical agony.

She started reading about her disease and make aware everyone, she surpassed. She used to make visit to cancer hospital every year for motivation of other people that treatment is possible, if you are diagnosed early and properly treated. Now after 20 years, she is a grand mother, healthy, happy. She has a ultimate desire to donate her body organs after her death. Hats off to my mother and her spirit.

by Dr. Megha Gupta
The word Prophylactic means the procedure done or used in order to prevent a disease.

Oophorectomy is a surgery where ovaries and fallopian tubes are removed in women. Prophylactic Oophorectomy is procedure done to prevent cancer by surgically removing your ovaries and fallopian tubes.

Prophylactic oophorectomy is usually done in following conditions:

- **Inherited gene mutations**: People with a significantly increased risk of breast cancer and ovarian cancer due to an inherited mutation in the BRCA1 or BRCA2 gene — two genes linked to breast cancer, ovarian cancer and other cancers who have completed childbearing may consider this procedure.

People with other inherited gene mutations that increase the risk of ovarian cancer, including those with Lynch syndrome, might also consider this procedure.

- **Strong family history**: Prophylactic oophorectomy may also be recommended if you have a strong family history of breast cancer and ovarian cancer but no known genetic alteration. It might also be recommended if you have a strong likelihood of carrying the gene mutation based on your family history but choose not to proceed with genetic testing.
How much can oophorectomy reduce the risk of cancer?

If you have a BRCA mutation, a prophylactic oophorectomy can reduce your:

- **Breast cancer risk by up to 50 percent in premenopausal women.** As an example, if a woman with a high risk of breast cancer had a 60 percent chance of being diagnosed with breast cancer at some point in her lifetime, bilateral oophorectomy could reduce her risk to 30 percent.

- **Ovarian cancer risk by 80 to 90 percent.** As an example, if a woman with a high risk of ovarian cancer had a 30 percent chance of being diagnosed with ovarian cancer at some point in her lifetime, oophorectomy could reduce her risk to 6 percent, assuming an 80 percent risk reduction.

Preventive surgery to remove the ovaries might be an option that people with a high risk of ovarian cancer and breast cancer might consider to reduce their risk. Preventive (prophylactic) bilateral oophorectomy carries benefits and risks that must be carefully balanced when considering this procedure.