



## Rajiv Gandhi Cancer Institute and Research Centre

A Unit of Indraprastha Cancer Society  
Registered under "Societies Registration Act 1860"

Architect's Impression of RGCI & RC (post expansion)

# News Letter

Vol. XVII

No. 8

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### EDITORIAL

#### PREVENTIVE MEDICINE IN PATHOLOGY

Most patients are unaware that there is a potential for their pathology to be misinterpreted. It is uncommon for patients to seek a second opinion on their pathology. Patients have little contact with pathologist and generally don't understand the process by which a diagnosis is made. Most patients are under the misconception that their surgeons render the diagnosis since they convey the diagnosis to the patients.

Less talked about is the preventive medicine of pathology, e.g. prevent a wrong diagnosis and a wrong treatment. One of the ways to prevent a wrong diagnosis is to improve the processes and secondly to have reviews of slides from peers or pathologists from other institutions.

Changes in the pathology interpretation (the diagnosis) can drastically alter clinician's treatment plan and patient's prognosis. As in all disciplines of medicines, the goal of pathology is to conform to the ethical principles of beneficence and non maleficence; the obligation to help and not to harm patients. To this end, pathologists are obliged to provide accurate and timely diagnosis, to protect patients from wrong diagnoses and to reduce the diagnostic variability that can have a major impact on patient's therapy and management.

Over the last two decades, several studies have been published documenting rates of diagnostic discrepancies in surgical pathology. A discrepancy is defined as when one pathologist renders a diagnosis and another pathologist looks at the same material and renders a different opinion or diagnosis. Major discrepancy is that discrepancy that results in or would have resulted in alteration of treatment and / or prognosis. Minor discrepancy is that discrepancy which has diagnostic disagreement but doesn't lead to treatment alteration.

According to one of the reports (2003) where intradepartmental prospective blinded review was done, there was minor discrepancy in 8.8% cases and major discrepancy in <0.1% cases. If extra-departmental or inter-institutional review is carried out, there is major discrepancy in 7% of head & neck cancer cases; 18% cases of endocrine tumors and 23% of endometrial tumors. It is clear that inter-

institutional review performed by experienced subspecialty pathologists detects a significant rate of diagnostic discrepancy than intradepartmental consultations among general surgical pathologists. Inter-institutional review is not feasible for routine cases but it is an important tool for medical audit.

The experience of the pathologist has an impact on the precision of pathology findings. Pathologists choosing to practice within a distinct subspecialty (organ system) acquire a great fund of knowledge. Subspecialty pathologists, refine their practice exclusively within their area of expertise, may review greater number of cases over a shorter period, as compared to general pathologists. The level of experience and expertise between general pathologists and subspecialty pathologists broadens with each year of practice.

Pathology review is an essential component of total quality assurance program in diagnostic pathology & cytology. If we want to develop quality assurance programme, we should have

- 1) Prospective intradepartmental review of cases. At RGCI & RC every case is peer-reviewed by in-house pathologist before releasing final report
- 2) Atleast 0.5% of patho / cyto slides should be reviewed by subspecialty pathologist of other institutions. Such practices form a part of medical audit
- 3) Rare or unusual cases must be reviewed in addition to those cases where review is demanded by patient himself

It is understandable that misdiagnosis can result in unnecessary, harmful and aggressive therapy or inadequate treatment. Development of subspecialty pathology services and inter institutional review may increase diagnostic accuracy of pathology evaluation.

**Dr. Dewan A. K.**  
Medical Director



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*Current trends in*

# BREAST IMAGING

**21st September 2013**

Crystal Ballroom,  
Hotel Crowne Plaza, Rohini, Delhi

### BREAST CANCER

A Global Problem

Indian Scenario

Imaging Strategies

Confusing Screening Guidelines

### Highlights

- Renowned Faculty
- New Technologies
- Breast Screening Strategies
- Breast Tomosynthesis
- 3D Mammography
- Breast MRI / Biopsy

### Who Should Attend

- Radiologists
- Breast Imaging Specialists
- Breast Surgeons
- Onco Surgeons
- Medical Oncologists
- Radiation Oncologists
- Pathologists
- General Practitioners
- Gynaecologists
- Healthcare Administrators

### Organizing Committee

Dr. A K Chaturvedi : Chairman | Dr. S A Rao : Secretary | Dr. Shelly Sharma : Joint Secretary

**EARLY BIRD REGISTRATION (till 31<sup>st</sup> August 2013)**

**Consultants : ₹ 500 | Students : ₹ 200**

(Registration includes access to full day sessions, lunch, tea / coffee)

Cheque / Draft to be drawn in favour of "Rajiv Gandhi Cancer Institute Conference Account, payable at Delhi"

(Please mention your name & address on the back side of the cheque / draft)

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## GENETIC COUNSELING & TESTING: WHAT YOU NEED TO KNOW

Angelina Jolie's decision to undergo preventive double mastectomy puts cancer genetics in the spotlight. Her frankness about her choice, no doubt has helped inform many more women about genetic testing and lead them to question their doctors about what is right for them. Since then, we at Preventive Oncology O.P.D. are getting 2 to 3 such queries everyday. Genetic counseling and testing is a new frontier in the fight against cancer.

About 5 – 10% of all cancers are inherited. This means that mutations in specific genes are passed from one blood relative to another. Individuals, who inherit one of these abnormal genes, have a much greater chance of developing cancer within their lifetime and at an earlier age.

Common cancers associated with family history include:

- Breast cancer
- Colorectal cancer
- Ovarian cancer
- Prostate cancer
- Endocrine cancers

Individuals with a family history of these types of cancer should go for genetic counseling to find out ways they can monitor and manage their increased cancer risks. Genetic counseling does not always result in genetic testing; however, genetic testing should not occur without genetic counseling.

American Society of Clinical Oncology's (ASCO) policy statement on genetic testing recommends testing under three conditions:

- If the person has a personal and family history suggesting genetic susceptibility
- Test can be adequately interpreted
- Test results will influence medical decision making

To emphasize the importance of counseling, ASCO experts also recommend that testing “only be done in the setting of pre and post-test counseling”.

### Candidates for genetic testing:

- Personal or family history of early - age onset of adult cancer
- Multiple close family members with same type of cancer or related cancers (e.g. breast & ovarian cancer)
- Family history of two or more different cancers in the same person
- Relative with confirmed cancer genetic mutation
- A rare cancer such as male breast cancer or sarcoma in family

### ISSUES TO CONSIDER BEFORE HAVING A GENETIC TEST:

Before you undergo genetic test, it is important to know that you can handle the answer, because it is not a piece of knowledge that you can un-know. You need to prepare yourself for possible bad news too.

#### Benefits of genetic testing:

- Provides cancer risk estimates for affected and unaffected individuals
- Identifies the cause of cancer in the family
- Helps family members make medical and life style decisions

#### Limitations of genetic testing:

- Not 100% accurate
- Cannot tell if or when an individual will develop cancer
- Costly
- May not provide information for every individual

### COMMON HEREDITARY CANCER SYNDROMES FOR WHICH GENETIC TESTING IS AVAILABLE:

#### Hereditary breast cancer syndromes

- Hereditary Breast – Ovarian Cancer Syndrome

Genes: BRCA 1 & BRCA 2

Related cancer types : Breast, Ovarian, Prostate, Pancreatic male breast cancer etc.

- Li Fraumeni syndrome

Gene P53

Related cancer types: Breast cancer, Soft tissue sarcoma, Osteosarcoma, Leukaemia, Brain tumor etc.

- Cowden Syndrome

Gene : PTEN

Related cancer types : Breast, Thyroid, Endometrial cancer etc.

### Hereditary Colorectal Cancer Syndromes

- Lynch syndrome

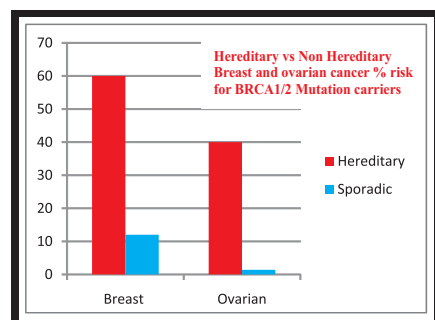
Genes:MLH1 , MSH2 , MSH6 , PMS2 , EpCAM

Related cancer types: Colorectal, Stomach, Endometrial, Ovarian, Small intestine etc.

- Familial Adenomatous Polyposis

Gene: APC

Related cancer types: Colorectal, Small intestine etc.



**Risk Reducing Option for Lynch Syndrome Mutation Carriers**

- Colonoscopy every 1 to 2 years, beginning at age 20-25, increasing to every year after age 40
- Yearly gynecologic exam, beginning at age 25 to 35, including:
  - Transvaginal ultrasound (TVU)
  - Endometrial tissue sample
  - CA-125 blood test
- Screening for other Lynch syndrome-related cancers that are part of the family history
- Preventive surgery: TAH/BSO; colectomy

**Risk-Reducing Option for BRCA1/2 Mutation Carriers**

Option	Breast Risk	Ovarian Risk
Tamoxifen	50%	-
Mastectomy	> 90%	-
Oophorectomy	50%	96%
OC	-	60%

### Conclusion

It is important to keep in mind that most cancers are the result of lifestyle choices like: smoking, oral tobacco, not exercising and eating unhealthy food. Only 5 – 10% of cancer cases are related to genetics. Genetic testing won't reveal that you will or will not receive a cancer diagnosis in the future. It will simply tell you if you are at a greater risk or if you are carrying a gene that is linked to certain types of cancers.

**Dr. J. G. Sharma / Dr. Indu Aggarwal**  
Dept. of Preventive Oncology

**Dr. Urmi Sarkar**  
Genetic Counselling Services

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To:

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*If undelivered please return to :*

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