



NewsLetter

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EDITORIAL

TRANSGENDER PEOPLE - DO THEY CARRY CANCER RISK?

"It is not about being a new person but becoming the person you were already meant to be" (Transgender)

Transgender people comprise a diverse group of individuals whose gender identity or expression differs from that originally assigned to them at birth. Some, but not all, transgender people elect to undergo medical gender affirmation, which may include therapy with cross-sex hormones and/or surgical change of the genitalia and other sex characteristics. As cross-sex hormones administered for the purposes of gender affirmation may be delivered at high doses and over a period of decades, the carcinogenicity of hormonal therapy in transgender people is an area of considerable concern. In addition, concerns about cancer risk in transgender patients have been linked to sexually transmitted infections, increased exposure to well-known risk factors such as smoking and alcohol use, and the lack of adequate access to screening. Several publications have identified cancer as an important priority in transgender health research and called for large-scale studies.

Transgender people are particularly vulnerable when it comes to health care, not only because of discrimination, but also because of distinct health requirements. Transgender men and women remain susceptible to cancers of reproductive organs that are no longer in alignment with their gender. For example, trans women might not recognise the persisting risk of prostate cancer. Those who have undergone sex reassignment surgery might be unaware of the continuing possibility of reproductive cancers due to residual tissue that remains after surgery. This can be complicated by the transgender people opting out of cancer screening and examinations because of emotional or physical distress associated with the discordance between their gender and their natal genitalia. Disengagement from gender-oriented health care, for any reason, results in missed opportunities for cancer screening and diagnosis, and likely contributes to care disparities in this population. Crucially, this is compounded by the increased risk of cancer in the transgender population. The use of oestrogen, progestin, and testosterone, to induce or sustain sex transitions, are often used in excessive doses and continued without medical guidance—the effect of this on cancer development is unclear. Additionally, actions considered preventative for certain gynaecological cancers in non-trans women, such as taking

the birth control pill, might not be considered by trans men. Finally, as reported for lesbians, gay men, and bisexual people, transgender people are also more likely to smoke and drink alcohol, and have a greater chance of contracting HIV and human papillomavirus than the overall population, all of which contribute to an increased cancer risk. Cancer care for transgender people is a growing concern and health-care services that are both respectful of this population's differences, and also relevant to and inclusive of them are needed. Moreover, research into how cancer affects the transgender community, as well as how to prevent, screen, and treat cancer in this population, will improve cancer control. Better integration of the needs of people with non-traditional genders and sexualities in health care will help combat enduring health inequalities. We don't have cancer statistics for transgenders in India.

Next time you see transgender people, keep in mind

1. Transgenders are at risk for cancers of reproductive organs that do not match their gender identity. A transgender female may develop prostate cancer in her lifetime while a transgender male may develop cervical, breast or ovarian cancer.
2. Gender confirmation surgery may not remove 100% of the tissue in that area. For example, a transgender male may still need annual breast exams.
3. There are other steps everyone can take to reduce the risk of cancer. These include avoiding tobacco and tobacco products, limiting alcohol use, practicing safe sex, maintaining a healthy diet, living an active lifestyle and more. Understanding screening recommendations is just one of the many obstacles and challenges faced by transgender people when it comes to taking care of their health. Many transgenders do not see a doctor when they need, for fear of being mistreated. Additionally, insurance barriers and societal risk factors (mental health, substance abuse, etc.) are other obstacles.

(Transgender Day of Remembrance – Nov. 20)



Dr. A. K. Dewan
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SURGERY FOR LUNG CANCER

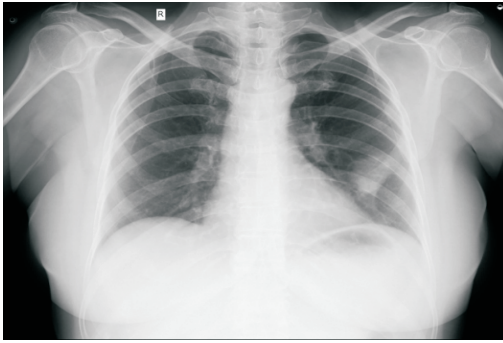


Image 1: Chest xray showing a left lung nodule

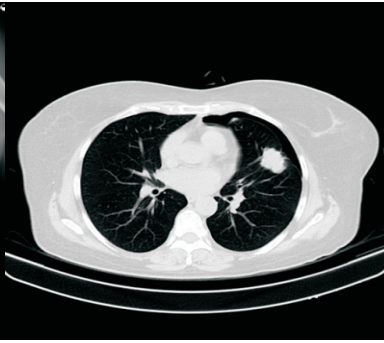


Image 2: CT Chest showing a left lung nodule

The treatment of non small cell lung cancer (NSCLC) has become one of a multidisciplinary approach from diagnosis to accurate staging for optimal management. The diagnosis is usually suspected on imaging as seen on CXR or CT chest. A core tissue biopsy is obtained using Ultrasound guided, CT guided, fiberoptic-bronchoscope biopsy and when all fails using a thoracoscopic biopsy done under general anesthesia. FNAC specimen should be avoided as tissues are inadequate for a IHC workup to differentiate the type of tumor as morphology alone may be inadequate. The staging of lung cancer is crucial for accurately selecting those patients as surgery provides the best chance of cure in early stage 1 and

stage 2 lung cancers and in selected stage 3 cases. However most cases of lung cancer are diagnosed at an advanced stage where surgical resection alone cannot provide cure and are managed in a multimodality approach.

Presently since the advent of thoracoscopy in the 90s and robotic surgery, lung cancer resection is being carried out in a lesser invasive way to reduce the morbidity associated with conventional open thoracotomy. Lung cancer surgery can be discussed in to two groups as in early lung cancer stage I, II and locally advanced stage IIIA (Table 1, 2). It is very important that a preoperative staging of N status is done using noninvasive and invasive modality (Table 3 - ESMO Guidelines for Lung Cancer 2017). For disease stage II and beyond MRI of brain with contrast is recommended as small lesion can be missed on PET CT imaging. The gold standard for lung cancer surgery is a lobectomy with mediastinal nodal dissection and R0 resection. As per IASLC definition of completeness of lung cancer surgery they have categorized into three groups as.

Complete: Free resection margins proved microscopically; systematic nodal dissection or lobe-specific systematic nodal dissection; no extracapsular nodal extension of the tumor; and the highest mediastinal node removed must be negative.

Incomplete: Whenever there is involvement of resection margins, extracapsular nodal extension, unremoved positive lymph nodes or positive pleural or pericardial effusions.

Uncertain: When the resection margins are free and no residual tumor is left, but the resection does not fulfill the criteria for complete resection, there is carcinoma in situ at the bronchial margin or positive pleural lavage cytology.

Early Lung Cancer (Stage I, II): The early lung cancer are those with tumor size upto 5 cm in size with no nodal involvement or lymph nodal involvement restricted to the hilum, interlobar and segmental bronchi. The treatment of choice in those who are fit to undergo surgery is lobectomy with mediastinal lymph node dissection (MLND).

Open Lobectomy: The result of open anatomical lobectomy in early stage NSCLC are good and is the gold standards against which other minimally invasive lobectomies are compared. In the large North american ACOSOG Z0030 trial published in 2011 the disease-free survival following surgery at 5 years was 68% for early stage patients. The most important predictor of survival was the completeness of resection, lymph node involvement and final pathological staging.

Minimally Invasive Techniques: The various minimally invasive approaches for lobectomy and MLND which avoids spreading the chest wall are:

Video Assisted Thoracoscopic Surgery (VATS): VATS can be performed using 2 to 3 or more ports following the same principals of open surgery but without the morbidity of a thoracotomy.

Uniportal Thoracoscopy: This technique using a single wound was popularized by Dr Rivas and group with all the benefits of minimally invasive surgery.

Robotic Assisted Thoracic Surgery (RATS): The present Davinci robotic system has been used in the management of lung cancer and the results are very encouraging oncologically. A multi-institutional study of over a thousand cases has in fact shown equivalent survival compared to open surgery and promising initial results with N2 disease.

Subxiphoid Thoracoscopy: In order to avoid intercostals neuralgia associated with thoracoscopy which enters through the intercostals space the application of subxiphoid approach originally used for pericardial disease was first reported by Liu et al. The subxiphoid approach avoids intercostals nerve injury unlike other minimally invasive approach. The technique is more demanding with specially designed instruments which are longer and more curved. In the future it is likely that the subxiphoid route will provide the access for single port Robotic surgery in the chest.

Mediastinal Lymph Node Clearance: Lung cancer surgery is incomplete without a proper systemic nodal sampling or mediastinal lymph node dissection. The ACOSOG Z0030 trial has shown that MLND does not increase operative morbidity or mortality compared with mediastinal nodal sampling. Mediastinal node sampling involves selective removal of the mediastinal lymph nodes based on preoperative imaging and intraoperative finding, whereas in MLND the soft tissue with contained nodes in a defined boundaries are removed enbloc increasing the lymph nodal yield. Mediastinal node sampling may be justified in early lung cancer where vigorous sampling technique and intraoperative frozen section examination of the nodes is done as in the ACOSOG Z0030 trial. Meta analysis has shown that MLND provides survival benefits as the stage of the disease increases and the possibility of lymph node metastasis increases. In the present era where adjuvant chemotherapy is the standard of care with positive nodes in the hilar, interlobar and lung segments, an incomplete nodal dissection will deprive early stage disease the benefits of adjuvant systemic treatment due to missed positive nodes in the surgical specimen.

Locally Advanced Lung Cancer (Stage IIIA): Stage III NSCLC comprise a group of locally advanced tumors by virtue of size, local invasion and involvement of the mediastinal nodes, Stage IIIB disease is typically defined as involvement of contralateral mediastinal, contralateral hilar or supraclavicular nodes. Surgery is not the typical treatment even in those which are resectable and only in the context of clinical trials surgery may be done. Stage IIIA NSCLC represents a very heterogenous group based on the number of mediastinal nodal station involvement, size of node and resectability of mediastinal nodes enbloc and as such involves multimodality approach. The role of surgery in stage IIIA has been debated again and again over chemoradiation and patient selection is critical along with completeness of surgical resection.

An important aspect of surgery for this stage is its safe integration with other therapies. Patients with stage IIIA NSCLC who can be considered for resection fall into three distinct classes: those with T3N1 tumors, those with T4 tumors without N2 involvement which are technically resectable, and those with nonbulky N2 disease and tumors up to T3. These patients require an individual assessment of resectability, and it should be emphasized that the interventions offered to these patients must be carefully tailored to the specific presentation of the patient.

Mediastinal Lymph Node Disease (N2): Patients with N2 disease represent the largest subset of IIIA disease, and they have pathologically confirmed metastatic disease to the ipsilateral mediastinal nodes and/or subcarinal lymph nodes. These patients do very poorly with surgery as a sole treatment modality, with early studies showing 5-year survival rates <10% in patients with clinically apparent N2 disease. The lymph nodes may not be apparent on CT imaging or look bulky (nodes > 2.5 cm) and infiltrating the mediastinum and the later carries a worse prognosis compared with nodes that is not radiographically apparent prior to surgery. In view of the poor prognosis of N2 disease managed with surgery alone multimodality approach has evolved to manage this heterogenous group of disease. A large 2008 meta-analysis showed significant benefit to postoperative chemotherapy in this population. However, there was a 66% incidence of grade 3 or 4 adverse events, and 33% of the patients were not able to complete the adjuvant therapy. This led to study timing of chemotherapy in the neoadjuvant setting versus adjuvant and the Southwest Oncology Group study (SWOG 8805) examined the impact of neoadjuvant chemoradiation and showed a 26% 3-year survival rate, and noted survival strongly correlated with completeness of surgery. In the recent intergroup trial 0139, where a trimodality treatment was compared to definitive chemoradiotherapy in stage IIIA disease, survival in the trimodality arm was diminished by high perioperative mortality in those patients who underwent pneumonectomies. A Lobectomy was better tolerated in this trial and associated with 5-year survival rates >40%, highlighting the potential benefit of this approach with careful patient selection and meticulous surgical technique. Several guiding principles appear to be consistent regarding the use of multimodality therapy for stage IIIA NSCLC: (1) neoadjuvant clearance of mediastinal disease confers a strong survival benefit, (2) patients who present with bulky, infiltrating mediastinal disease have a worse prognosis and may be more appropriate for definitive chemoradiotherapy for treatment, and (3) an R0 resection should be the absolute goal for any patient taken to surgery.

Conclusion: In early stage lung cancer complete surgery as per IASLC definition remains the modality of choice with curative intent in those who are fit to undergo pulmonary resection. Minimally invasive approach should be adapted without a compromise in oncologic clearance. Future direction will be in the availability of newer adjuvant medical advancement to prevent recurrence usually at distant sites.

T – Primary Tumor

TX		Primary tumor cannot be assessed, or tumor proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy
T0		No evidence of primary tumor
Tis		Carcinoma in situ
		Tumor 3 cm or less in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus) ¹
	T1mi	Minimally invasive adenocarcinoma ²
	T1a	Tumor 1 cm or less in greatest dimension ¹
	T1b	Tumor more than 1 cm but not more than 2 cm in greatest dimension ¹
	T1c	Tumor more than 2 cm but not more than 3 cm in greatest dimension ¹
		Tumor more than 3 cm but not more than 5 cm; or tumor with any of the following features: ² <ul style="list-style-type: none"> • Involves main bronchus regardless of distance to the carina, but without involving the carina • Invades visceral pleura • Associated with atelectasis or obstructive pneumonitis that extends to the hilar region, either involving part of the lung or the entire lung
	T2a	Tumor more than 3 cm but not more than 4 cm in greatest dimension
	T2b	Tumor more than 4 cm but not more than 5 cm in greatest dimension
	T3	Tumor more than 5 cm but not more than 7 cm in greatest dimension or one that directly invades any of the following: chest wall (including superior sulcus tumors), phrenic nerve, parietal pericardium; or associated separate tumor nodule(s) in the same lobe as the primary
	T4	Tumors more than 7 cm or one that invades any of the following: diaphragm, mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina; separate tumor nodule(s) in a different ipsilateral lobe to that of the primary

N – Regional Lymph Nodes

NX		Regional lymph nodes cannot be assessed
N0		No regional lymph node metastasis
N1		Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
N2		Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
N3		Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral, or contralateral scalene, or supraclavicular lymph node(s)

M – Distant Metastasis

M0		No distant metastasis
M1		Distant metastasis
	M1a	Separate tumor nodule(s) in a contralateral lobe; tumor with pleural or pericardial nodules or malignant pleural or pericardial effusion ¹
	M1b	Single extrathoracic metastasis in a single organ ¹
	M1c	Multiple extrathoracic metastases in one or several organs

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CME – IMA Rohtak

RGCIRC organized a CME in association with IMA Rohtak on Friday, 26th October 2018 at Baya Tourist Resort, Housing Board Colony, Bhiwani, Haryana. Dr. Vaibhav Jain, Sr. Consultant – Interventional Radiology delivered a lecture on “Interventional Radiology for Clinicians ” and Dr. Amitabh Singh, Consultant – Surgical Oncology spoke on “Robot Assisted Partial Nephrectomy in Complex Renal Tumor” in the said CME.



CME – IMA Rohini



RGCIRC organized a CME in association with IMA Rohini on Friday, 16th November 2018 at Hotel Crowne Plaza, Rohini, Delhi. Dr. A. K. Dewan, Director – Surgical Oncology delivered a lecture on What is Latest in Oncology and Dr. Vaibhav Jain, Sr. Consultant – Interventional Radiology spoke on “Interventional Radiology for Clinicians ” in the said CME.

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