Summer Training at
Pfizer India Pvt. Ltd.
(April 9-June 23rd, 2012)

Outcomes Research for a New Cancer Drug: Clinical Data Collection for Pooled Analysis

By
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Under the guidance of
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Post Graduate Diploma in Pharmaceutical Management
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CERTIFICATE

This is to certify that Pulkit kadam has undergone summer training in Pfizer India Private Ltd, Mumbai from 9th April to 23th June, 2012

The candidate carried out all the studies related to summer training himself. His approach to the studies has been sincere, scientific, and analytical. This summer training in partial fulfillment of the course requirement is recommended for the award of Post Graduate Diploma in Pharmaceutical Management.

I wish his success in all future endeavors.

Dr .P. R.Sodani
(Dean Academics and student affairs)

Dr. Dipti Govil
(Assistant Professor)

ACKNOWLEDGEMENT

I would like to express my sincere gratitude towards **Pfizer India Pvt. Limited** for selecting me as a summer trainee and giving me an opportunity to work on this project and also for providing a good working ambience for successful completion of this project.

I thank **Dr. Divya Mishra(MD. Therapeutic lead, Oncology)** for placing me in the **Medical and Research Division** of Pfizer India Pvt. Limited. I would like to express my special gratitude towards my guide **Dr. Divya Mishra** who throughout my project has been a great teacher and supporter for showing me the right direction and motivating me during my project. Without her encouragement, guidance and interest, this project would not have materialized.

I would like to thank **Dr. Sonal J. Gawande** (Medical Advisor) for sharing his valuable expertise all through helping me being in a part of ongoing organisation's project.

I am highly grateful to Doctors for giving me their valuable time during their practice. Owing to their support and cooperation, I have successfully completed and compiled this report.

Last but not the least; I would like to express my sincere thanks to **Dr. P.R. Sodani** and my Institute **IIHMR** for providing me all kind of support in my summer placement at Pfizer India Pvt. Limited

Pulkit kadam

Contents:-

About the Organization[1]:-

Pfizer was founded in 1849, Pfizer is the world's premier biopharmaceutical company taking new approaches to better health. We discover, develop, manufacture and deliver quality, safe and effective prescription medicines to treat and help prevent disease for both people and animals. We also partner with healthcare providers, governments and local communities around the world to expand access to our medicines and to provide better quality health care and health system support. At Pfizer, colleagues in more than 90 countries work every day to help people stay happier and healthier longer and to reduce the human and economic burden of disease worldwide.

Pfizer in India:-

Pfizer Limited (India) has a turnover of US$ 165.86 million (November 2009.One of the highest spenders in pharmaceutical R&D globally, Pfizer has made clinical research investments of US$ 6.28 million (November 2009) in India. The company was awarded the FICCI SEDF (Socio Economic Development Foundation) Certificate of Commendation for its social responsibility efforts.Pfizer has won several awards including that for the multinational pharmaceutical company of the year and the most respected MNC. Moreover They are going beyond medicines.In India, Pfizer instituted the first ever Disease Management Programme – Healthy Heart™ in Cardio Vascular Disease (Hypertension, Chronic Stable Angina and Dyslipidemia), in partnership with Apollo Hospital, Hyderabad and Apollo Hospital, Chennai. We offer Patient Assistance Programmes for Glaucoma, Breast Cancer and Neuropathic Pain. We partner with physician associations to develop recommendations / guidelines of managing specific diseases. Its Headquarter is in Mumbai, Over 2,300 colleagues State-of-the-art manufacturing facility at Thane, Maharashtra

About Pfizer products:- Six Pfizer brands feature among the Top 100 pharmaceutical brands in India **.** Two of Pfizer India's brands

-- Corex (Cough Formulation) and Becosules (Multivitamin)

-- continue to rank among the Top 10 pharmaceutical drug brands

Pfizer has won the Golden Peacock Innovative Product for Magnex (Sulperazon). Becosules has won the Most Trusted Brand Award.

Academic Contribution:-

Formed the Academy of Clinical Excellence (ACE) in collaboration with Bombay College of Pharmacy to provide professional training to investigators and other clinical research personnel

Pfizer has also partnered with other pharmaceutical companies, contract research organisations and investigators to establish the Indian Society for Clinical Research (ISCR), a professional society aimed at raising the standards of clinical research. Pfizer Education and Research League (PEARL) is a new initiative in which Pfizer seeks to partner with institutes to improve existing clinical research and continuing medical educational capabilities.

Vision:- We will be recognized for meeting the diverse medical needs of patients in Emerging Markets around the world in an innovative, socially responsible and commercially viable manner.

Accolades:- Awards remind us that we are on the right track.

2011:-Pfizer India has been recognized as one of The Best Companies to Work For by Business Today magazine

2010:-Pfizer Limited awarded the Most Admired Pharmaceutical Company of the Year by Pharma Leaders Magazine

Kewal Handa, Country Manager - Pfizer Limited recognized as Pharma Professional of the Year by Pharma Leaders Magazine

Pfizer wins the Community Engagement Award at the Asia Responsible Entrepreneurship Awards 2010 in India.

2009:- Pfizer Limited (India) conferred the Multinational Pharmaceutical Company of the Year by Frost & Sullivan

2008:- Frost & Sullivan Brand Strategy Leadership Award for Becosules in the Indian Dietary Supplement Market

Pfizer India was recently conferred the ‘Innovative Training Practices’ Award for promoting effective and optimum utilization of human resource through education and training by the Indian Society for Training and Development (ISTD).

2007:- Reader’s Digest Trusted Brand Asia – Gold Award 2007’ in the vitamin and health supplement category for Becosules.

2006:- Pharma Excellence Awards 2006 in 'Innovative Products of the Year' category for Exubera.

Ranked #1 among multinationals and #3 among all pharmaceuticals, in the Business World survey. Kewal Handa, Managing Director Pfizer Limited, awarded the Bharat Shiromani award for his outstanding contribution in the pharmaceutical industry

2005:- Golden Peacock Innovative Service Award for Prime MD Today (Daxid).PC Quest 'Best IT Implementation Users Choice' award for OPTILEARN. Pharma Excellence Awards 2006 in 'Innovative Products of the Year' category for Exubera. Ranked #1 among multinationals and #3 among all pharmaceuticals, in the Business World survey.

2004:-Ranked #5 among all pharmaceutical companies, with respect to corporate image, field-force, and promotional programs (AC Nielsen-ORG Marg 'Corporate Image Survey').

Ranked #1 among all Pharma MNCs & #4 among all Pharma Companies by Business World.

Kewal Handa, CFO Pfizer Limited receives the ‘India CFO 2004 – Excellence in Finance in an MNC’ by International Market – Assessment Group

2003:- Voted as the #5 'Most Respected Company' in the Pharma sector (Business World). Corporate Advertising Campaign won a Silver Award at the ABBY-All India Awards for Creative Excellence. Gelusil brand received a Silver Award for printing advertising. Golden Peacock National Training Special Commendation for Training practices.

2002:-Express Pharma Biz Award for overall performance.

Rated as one of India's most socially responsive companies. Awarded by FICCI-Socio Economic Development Foundation for our Social Responsiveness.

My Responsibilities:-

1. **Clinical Rsearch**
    - Support to data collection of Pooled analysis for Cancer Drug
    - Vendor Liaisoning for Market Survey
    - CTA Support for CT30 Studies
    - Drafted Slides/summary of updates in India's Universal Health Coverage-2011
    - Secondary research on Pharmaco-economics/ Outcomes Research in the Indian Context.
2. **People:-** Values and Behaviors- Consistently Adhere to/demonstrate all Pfizer Values/Leader Behaviors, with Special focus on Integrity, Performance and Teamwork. Work in harmony with Internal and external Stakeholders
    - Learning and development- Enhance self development through on the job training. In consultation with direct supervisors identify additional areas of interest towards learning and development, along with training needs and gaps.

3. **Financial**
    - Support Medical Team Lead in budgeting , Provisioning and expense control as required.

Objectives and Working Methodology:-

Objective.1 :- To compile the biliography on Pharmacoeconomics/ Outcomes Research Projects in Indian context for systematic literature reviews.

Theory- Introduction to Pharmacoeconomics[2]:-

Pharmacoeconomics involves the utilization of two major methodologies for health economics analysis: cost analysis and cost outcomes. Cost analysis considers the costs of providing healthcare products or services, but does not consider the outcomes experienced by patients or providers. Cost-outcomes analysis is the most commonly used of the pharmacoeconomics methodologies. There are four types of cost-outcomes analysis:

- **Cost-minimization analysis;**
- **Cost-effectiveness analysis;**
- **Cost-benefit analysis; and**
- **Cost-utility analysis.**

The type of analysis used depends on the nature of the problem being studied. Cost-effectiveness analysis is used to compare two or more treatment options for a specific condition. Cost-effectiveness is dependent on the value in nonmonetary terms that is placed on the outcome in relation to the cost. This analysis compares the unit of effectiveness – i.e. number of years of life saved, number of lives saved, percentage lowering of glucose level, etc. – with the cost of the treatment. The results are then plotted and those treatments along the 'effectiveness frontier' have the lowest cost and highest effectiveness. A treatment can be referred to as being cost-effective if it has an outcome that is worth its corresponding cost in relation to alternative therapies. For example, the diuretic hydrochloro-thiazide may be the most inexpensive treatment for hypertension, but it often requires a potassium supplement. The additional cost involved in the therapy means that this drug is not always the most cost-effective therapy. This method of cost-outcomes analysis is the most frequently utilized method. Cost minimization is a type of cost-effectiveness analysis that is used if two alternative therapies are determined to be the same,

essentially. After determining the effectiveness, this method determines which treatment minimizes costs. The pharmacoeconomic tool compares all the costs and consequences of two or more therapeutic interventions. The objective of this method is to select the least costly among multiple equivalent interventions. This method is frequently used to compare brands with generics, different routes of administration and different settings of administration, etc. A cost-benefit analysis compares the costs and outcomes of alternative therapies and the outcome is then expressed in monetary terms. Cost-benefit analysis allows researchers to make comparisons across a wide variety of alternatives. It compares the costs involved in implementing a programme with the value of the outcome. Since the endpoints are measured in monetary terms, different endpoints can be studied, such as a surgical procedure compared with a pharmaceutical intervention. Cost-utility analysis is performed in the same manner as cost-effectiveness analysis except that the endpoint differs. The endpoint of cost-utility analysis is described as 'quality-adjusted life years saved'. This allows cost utility analysis to compare therapies for different diseases. Cost-utility analysis integrates both the costs and the consequences of a therapy into its comparison. Cost utility measures the final outcomes in changes of life-expectancy. This method is often used when a programme affects morbidity and mortality. Since pharmacoeconomics is a multidisciplinary field, a group involved in pharmacoeconomics would include pharmacoeconomists, epidemiologists, statisticians, data personnel and research personnel. Data may be collected in a variety of ways, including patient self report questionnaires and direct data abstraction from patients' medical and employment records and bills. There are three types of pharmacoeconomic studies:

• Prospective;

• Retrospective; and

• Model.

Prospective studies are experimental studies that can be an additional part of a randomised clinical trial or strictly an economic evaluation. Prospective studies are the least useful because they require extensive time and money. Retrospective studies are data analyses of clinical trials or cohort studies that were conducted previously. This type of study involves a comparison of

treatment users and non-users that are followed from some point in the past to the present. Retrospective studies are the ideal study method. Model studies are performed as a method of displaying data obtained from a variety of resources if previously studied data is unavailable. Modelling is an inexpensive and effective way of illustrating existing available data regarding the costs and outcomes of alternative therapeutic interventions. Modelling frameworks include decision trees, influence diagrams, Markov analysis, discrete event simulation and systems dynamics. The goal of these methods of pharmacoeconomic evaluation is to assess the value of pharmaceutical products and services while incorporating clinical, economic and humanistic outcomes. Pharmacoeconomic methods are utilised to assist physicians, hospitals, insurers, patients and healthcare professionals in making important decisions as to what drug therapies should be chosen. When the FDA or EMEA approves a drug after going through extensive clinical trials focusing on efficacy and safety, numerous drugs that can be used interchangeably are often released into the market. This leads to difficulty in creating formularies for hospitals and insurance companies. For example, pharmacoeconomic studies can be conducted comparing hospitalisation rates of Cancer patients using corticosteroid therapy versus

beta-agonist therapy. The data obtained from this research can assist HMOs, physicians, health authorities and patients in choosing proper drugs.

Pharmacoeconomics is used to determine which drug should be included in the formulary by choosing the most effective treatment at the lowest price. It has been found that 86% of hospital pharmacists indicate that pharmacoeconomic data is used in formulary decision-making. In addition to drug versus drug decisions, pharmacoeconomics allows us to make decisions between drugs versus surgery and drugs versus ‘watchful waiting’, based on the effectiveness of the treatment and the cost. The National Institute for Clinical Excellence (NICE) in the UK functions in this way as well.

Drugs can be assessed from a pharmacoeconomic standpoint after the product has been approved. In the case of Cancer, where costs account for 1% of the total health expenditure of the US and most countries, efficacy of treatment is not the only factor in determining formulary coverage; pharmacoeconomic studies must be carried out. One drug may reduce Cancertic exacerbations, but may not be the best formulary choice.

Pharmacoeconomic studies consider the total costs incurred from the disease – both direct and indirect costs. Direct costs consist of pharmaceutical drugs, medical devices, physician visits, emergency room visits, diagnostic testing services, education and research. Indirect costs comprise lost school and work days, lost productivity, travel time and waiting time. Direct costs have been shown to exceed indirect costs, in India. The greatest portion of direct costs incurred by Cancer is medication and those exacerbations that require hospital treatment. Therefore, pharmacoeconomic analysis must include more than just

the costs of drugs. Many costs are not seemingly obvious, for example education and non-compliance costs. Total Cancer management costs must be taken into account when creating pharmacoeconomic analysis.

For example, An Cancer medication with education will help increase adherence, whereas an Cancer medication without education will have a lower rate of adherence. The lower rate of adherence can lead to increased exacerbations and increased hospital visits, therefore increasing costs. For the lowest cost, the formulary should include the educational programme.

Pharmacoeconomic analysis is important since payers such as third-party payers or government/ private health plans utilise them when determining whether to reimburse a claim. In addition, many families in the US lack pharmaceutical drug coverage or any healthcare coverage. This results in decreased adherence, lack of prescription filling, decreased physician visits and increased emergency room care. Physicians need to be aware of effective therapies that minimise costs. Pharmacoeconomic analysis can be utilised to create clinical guidelines for physicians that will assist them in prescribing the most efficient drug. In order to achieve the goal of the least expensive treatment with the best possible outcome, pharmacoeconomics should be implemented into the formulary decision-making process. US pharmaceutical companies often present pharmacoeconomic data when applying for a new drug approval from the FDA, when formulating clinical trial designs and when investigating break-even prices.

Hospitals also use pharmacoeconomic data for formulary decision-making, treatment guidelines, drug utilisation reviews and disease management protocols. Pharmacoeconomic evaluations are important tools used throughout the healthcare field in order to optimise healthcare expenditures, and we can expect to see their impact increase in the future.

Pharmacoeconomics is an essential tool in therapeutic decision-making. By using databases of large HMOs or other insurers or payers, a pharmacoeconomist can compare different drugs directly, whereas randomised, controlled trials only compare a drug with a placebo within a small group of patients. The goal is to find the most effective and efficient treatment at the least cost, whilst optimising the outcomes of the patient and decreasing costs to society.

Analytic Method	Input (Cost)	Consequences	Primary Concern
Cost - benefit (CBA)	Monetary	Monetary	Maximal increment in benefit for limited resources
Cost-effectiveness (CEA)	Monetary	Clinical: life-year gained, % patients reaching goal	Least costly way to achieve objective; compare alternatives within 1 therapeutic category
Cost-utility (CUA)	Monetary	Quality-adjusted life-year (QALY) gained	Societal allocation; compare alternatives across therapeutic categories
Cost-minimization (CMA)	Monetary	Equal benefit **ASSUMED**	Efficiency (e.g., generic, therapeutic substitution)
Cost-of-illness		Monetary	Total cost identification

The Overall Costs of Medical and Pharmaceutical Care Continue to rise. The added Value to Society, individual healthcare institute and Patients as weighed against cost has not been well established. The Problem has become increasingly difficult to address because of the lack of understanding of methodologies for evaluation of new and existing drug therapy.

Diffrences Between Literature Review, Systematic reviews and Meta- Analysis:-

Literature Review	Systematic Review	Meta Analysis
Literature reviews are often very useful background reading, they differ from a systematic review in that they are not led via a peer-reviewed protocol and so it is not often possible to replicate the findings. Although often very useful background reading, they differ from a systematic review in that they are not led via a peer-reviewed protocol and so it is not often possible to replicate the findings. In addition, such attempts at synthesis have not always been as rigorous as might have been hoped.	A systematic review is a thorough, comprehensive, and explicit way of interrogating the medical literature. It typically involves several steps, including **(1)** asking an answerable question (often the most difficult step), **(2)** identifying one or more databases to search**, (3**) developing an explicit search strategy, **(4)** selecting titles, abstracts, and manuscripts based on explicit inclusion and exclusion criteria, and **(5)** abstracting data in a standardized format.	A "meta-analysis" is a statistical approach to combine the data derived from a systematic-review. Therefore, every meta-analysis should be based on an underlying systematic review, but not every systematic review leads to a meta-analysis.

However, systematic reviews are most needed whenever there is a substantive question, several primary studies – perhaps with disparate findings – and substantial uncertainty. One famous case is described by The Cochrane Library:8 a single research paper, published in 1998 and based on 12 children, cast doubt on the safety of the mumps, measles and rubella (MMR) vaccine by implying that the MMR vaccine might cause the development of problems such as Crohn's disease and autism. The paper by Wakefield *et al*9 has since been retracted by most of the original authors because of potential bias, but before that it had triggered a worldwide scare,

which in turn resulted in reduced uptake of the vaccine.10 A definitive systematic review by Demicheli *et al* on MMR vaccines in children concluded that exposure to MMR was unlikely to be associated with Crohn's disease, autism or other conditions.11 Here, then, is an area where a systematic review helped clarify a vital issue to the public and to healthcare professionals; preparing such a review, however, is not a trivial exercise.

Methodology :-

S.No.	Steps	Deliverables
1.	**Protocol(describing detailed methods that will be used to conduct systematic Literature Review.**	**Full Study Protocol**
2.	**Conducting searches across databases**	**To prepare search strategy for each database**
3.	Screening abstracts and full texts (First and Second pass)	To screen all the abstracts and full text studies retrieved from searches
4.	Qualitative analysis	To compare findings from systematic Literature review with results from Pfizer's Global Survey.
5.	Report	First draft followed by final draft.

- Bold part is executed.

Findings:- Here are the below List of Research Articles search from all the relevant paid Research Resource in the Pfizer's Robust Library network.

Bibliography:-

Type	CEA	CUA	CMA	CBA	Misc.
Articles	16	11	2	5	6
Disscusion Papers	0	0	0	1	3
Reports	1	1	0	1	0

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Objective.2 :- To review the Journal " THE LANCET" of Topic " India's Universal Health Coverage" published on January, 2011 followed by the involvement in the deliberation of understanding of Questionnaire and Steps of conducting Market Research Survey.

Methodology:- A PowerPoint Slide was prepared and presented to Therapeutic Leader , Oncology division, Pfizer) based on The Lancet's " **India's Universal Health Coverage 2011**"

Findings:-

There are following topics which are there in the article:-

1. *Gender equity and universal health coverage in India.*

- Executive Summary:- In this Series in *The Lancet, Srinath Reddy and* colleagues call for universal health-care coverage in India, and outline why the development of national health provision is both timely and necessary.

- Issues of gender inequity remain in India and impede the nation's public health and development. Recent findings from the World Economic Forum place INDIA among the lowest ranked nations in terms of gender equity.

- Women are less likely to be literate, continue in their education, participate in the labour force, receive equal pay for similar work, and hold a political position than are men.

2. *India: Access to affordable drugs and the right to health*.

- Executive Summary:- Drugs account for 20–60% of health-care costs, and 50–90% of these costs are paid out-of- pocket by patients. The right to health is a fundamental right in India, judicially recognized under article 21 of the Constitution.

- Access to affordable drugs has been interpreted to be part of the right to health under Article 21 of Indian Constitution.
- Competition from generic companies is the key to affordable drugs.
- The absence of patent protection for drugs in India from 1972 to 2005 allowed drug companies to use alternative non-infringing processes to manufacture generic drugs(TRIPS-2005). Generic companies in India can therefore produce drugs at prices that are among the lowest in the world.

3. *Governance in health care: A Karnataka experience.*

- Executive Summary:- Practices Corruption in health services is serious, being an obstacle to the achievement of good health outcomes for the state, and a cause of harm and avoidable injury to individuals.

- The corruption perception index for India is 3·4, with a rank of 85th worldwide.
- **Health Care: 2nd most corrupt sector in India.**
- More than 1,50,000 estimated households below the poverty line paid bribes for seeking basic health care in 2005 in the state. In 2008, 64% of all bribes paid in the state for basic services was by people living below the poverty line and amounted to INR650 million.

  A review of the pharmacies in Karnataka showed that nearly half lacked a qualified pharmacist. However, there have been only 14 prosecutions since 2008. Karnataka's Lokayukta estimates that "nearly 25% of the health budget gets siphoned off due to corruption at various levels". For example, 18% of the drug procurement budget went on nimesulide, a nonessential drug within 2008 itself .

4. *Continuing challenge of infectious diseases in India:-*

Executive Summary:-

5. *Reproductive health, and child health and nutrition in India: meeting the challenge.*

Executive Summary:-

6. *Chronic diseases and injuries in India*.

Executive Summary:-

7. *Health care and equity in India:-*

Executive Summary :-Recent rapid economic growth provides a unique opportunity to increase financial commitments to support the public health system and health-systems research.

- India can also draw from its booming technology sector to innovate and strengthen the development of health information systems, which has already begun.

- Furthermore, an opportunity exists to harness the capability of the domestic pharmaceutical industry by encouraging it to take greater responsibility for delivering equity in health care.In this way, a health system built on a strong foundation of public health and primary care has to be synergised with public policies that promote crucial intersectoral approaches. Improved water and sanitation, food security, poverty reduction, and changes to other structural factors, complemented by an equitable health system, will help ensure greater equity in health for more than 1 billion people.

8. Financing health care for all: challenges and opportunities

9. Towards achievement of universal health care in India by 2020: A call to action

Conclusions/ Summary of the Presentation:-

There is a great potential effort to channelize the type of Health Sectors without being stagnant to specific Statistical data like Infant Mortality Rate etc. It explains transparently the shortcomings in Indian Health Scenario and broader recommendations for radical transformation of India's health-care system are realised. The Milestones targets for 2012, 2015, and 2020 is precisely farsighted. The putting of points act is ambitious, but also commensurate with India's aspiration to be a leading player on the global stage. The plenty of programs in Indian Health Scenario and their Implementation Levels are briefly explained with Accurate Evidences, It is suggest by the journal to design the implementation plan for the Integrated National Health System, monitor the progress towards agreed goals, and present a report to the nation every 2 years. The target 2020 for Healthcare in India and its urgency with which all of the recommended actions need to be taken to fulfill that objective. It is efficiently explains about restriction of actions in one or some specialties of health care will not suffice. Interventions to increase the available health services will help but will have only a small effect if interventions are also not undertaken to radically transform the health system. Without mechanisms for health financing, which make health care universally accessible even improvements in the quality of health services will not be provided to many people in the population. Without action to achieve the major determinants of health for which the locus of control resides in other sectors, actions confined to the health-care sector will provide only incomplete benefits. All of these actions are unlikely to be initiated or successfully

implemented in a sustainable manner if a broad-ranging societal consensus and nonpartisan political commitment are lacking. Quoting all stakeholders in India— government, civil society, private sector, academia, and the media—to engage in an active participation for making universal health care a shared national goal by 2020. Public health experts and Researchers level act are universally applicable of participation because the underlying values for betterment of Healthcare up to 2020.

Objective 3:- To evaluate Treatment outcomes in patients with non small cell lung cancer (NSCLC) receiving the drug.

Scenario in India[3]:- One of the world's leading research and advisory firms focusing on pharmaceutical and healthcare issues, finds that the non-small-cell lung cancer drug market in India will almost double by 2013, growing from $27.7 million in 2008 to $52.1 million in 2013. This growth will be fueled by an increased uptake of antimetabolites and targeted therapies. In fact, the epidermal growth factor receptor (EGFR) and vascular endothelial growth factor (VEGF) inhibitor drug classes will dominate the market throughout the forecast period with a combined market share of 55 percent by 2013.

The new Emerging Markets report entitled Non-Small-Cell Lung Cancer in India also finds that Western-branded drug sales in India's non-small-cell lung cancer market will command 54 percent by 2013. Even though Western-branded small-molecule agents are facing fierce competition from domestic products, including gefitinib (in the U.S. known as AstraZeneca's Iressa) and erlotinib (in the U.S. known as Genentech's Tarceva), future opportunities for Western companies will depend heavily on their pricing strategies and their patent protection in India. Moreover, monoclonal antibodies will surge and won't be copied successfully during the report's 2008 – 2013 forecast period.

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Western companies will depend heavily on their pricing strategies and their patent protection in India. Moreover, monoclonal antibodies will surge and won't be copied successfully during the report's 2008 – 2013 forecast period.

Stage	5-year Survival Rate	Drugs in 1A, 1B	Drugs in 2A, 2B
1A	49%	Gefitinib (Astra Zeneca)	
1B	45%	Pemetrexete, Carboplatin	Erlotinib (Teraceva)
IIA	30%		
IIB	31%		
IIIA	14%		
IIIB	5%		
IV	1%		

Methodology –

- A brief investigation was conducted throughout India to search the no. of Medical Oncologists whom are consulting NSCLC patients taking Pfizer's Targeted acting Drug.
- Drugs was imported from Pfizer Inc. USA with the approval from DCGI.
- Drug was administered to 8 patients in various parts of country.
- Sample Selection - A list of 6 vendor was provided by Pfizer .
- Total doctors 'Vendor' contacted – 6 (for 8 patients).

- Clinical details of the patients under selected doctors was collected.
- Informed Consent was taken before interview.
- Location - New Delhi, Gurgaon, Chandigarh, Rajkot and Pune.

Findings:- As progressed through a wide angled investigation with the help of Marketing Department. We found four doctors located in different cities of India

- New Delhi, Mohali, Gurgaon, Rajkot, Pune
- Rejection in the participation by the liaisoned vendor.
- In total of eight patients, data on six patients was collected.
    - One patient went outside India.
    - One died.

Learnings:-

- Effective Liaisoning with Sr. Medical Oncologists of India.
- Designing of Schedule Time framework for appointments.
- Interpreted Clinical Details including the filling of highly Technical tool and Patients Reports.
    - Tumour size assessments via PET Scan, Biopsy Reports, TNM Staging, ECOG status.
    - Haematological Details, Adverse events, concomitant therapy, Radiotherapy details.

Consulted Cancer Patients during every visit in terms of their present status, physical and mental health. During the consultation they were quite happy to get Pfizer's drug and its support as they told to me. I felt quite motivated while talking every patient

References :-

1. http://www.pfizerindia.com/enewswebsite/about.aspx
2. http://www.hwbooks.com/pharmacoeconomics3ed/chp1.pdf
3. http://decisionresources.com/INDIAS-NON-SMALL-CELL-LUNG-CANCER-DRUG-MARKET-WIL