

Effect of Chemotherapy upon Lifestyle for Patients with Pulmonary Carcinoma

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Abstract:

Objective(s): The study objectives are to determine the effect of chemotherapy upon lifestyle for patients with pulmonary carcinoma and to identify the association between the effect of chemotherapy upon lifestyle for patients and their demographic characteristics including (age, gender, housing, marital status, educational level, occupation and income).

Methodology: Quantitative design (a descriptive study). The study was conducted at the Medical City/ Baghdad Teaching Hospital; Al-Kadhimiya Teaching Hospital, and Radiation and Nuclear Medicine Hospital in Baghdad. Starting from 1st Dec. 2011 up to the 5th Feb. 2012. To achieve the objectives of the study, a non-probability (purposive) sample of (50) patients who were reviewed the hospitals above to receive chemotherapy to treat their disease and according to special criteria. Data were collected by self-reporting by patients with lung cancer. Instrument validity was determined through content validity, by a panel of experts. Reliability of the instrument was determined through the use of Pearson correlation coefficient for the test-retest approach, which was (0.80). Analysis of data was performed through the application of descriptive statistics (frequency, percentage, and mean of score) and inferential statistics (Chi-square (x2) test).

Results: The results of the study indicated that most of patients with pulmonary carcinoma have side effects of chemotherapy related to the physical, psychological, personal and social, and spiritual and religious beliefs aspects. Through the increase significant of items related to side effects during assessment of these items and there is no significant association between the effect of chemotherapy upon lifestyle for patients and gender, housing, occupation and income. While there is significant relationship between the effect of chemotherapy upon lifestyle for patients and age, marital status, and educational level.

Conclusion: The researcher can conclude that most of patients with pulmonary carcinoma have side effects of chemotherapy related to the physical, psychological, personal and social, and spiritual and religious beliefs aspects.

Recommendations: The study recommend the need to Make quality information more available to assist patients in making informed decisions about change life style after treatment with chemotherapy.

Keywords: *Pulmonary Carcinoma, Chemotherapy, Lifestyle*

Introduction:

Pulmonary carcinoma (lung cancer) is a malignant disease in which lung cells become abnormal, characterized by uncontrollable, and unlimited growth (1).

Pulmonary carcinoma is the leading cause of death in men and women who have malignant disease in the United States of America (USA). In 1998 an estimated 160,100 deaths occurred, accounting for 28% of all cancer deaths (2).

Until recently, many more cases of lung cancer were found in men than in women. That situation is changing, probably because cigarette smoking has become socially acceptable for women since the 1930 and 1940, beginning in 1087; deaths from lung cancer in women exceeded deaths from all other cancers, an estimated 171,500 new cases of lung cancer were diagnosed in 1998. The overall 5 year survival rate is only 14%, which is the poorest prognosis for any cancer other than cancers of the pancreas, liver, and esophagus (3).

Lung cancer most commonly occurs in individuals more than 50 years of age who have a long history of cigarette smoking. The disease is found most frequently in persons 40 to 75 years of age, with peak incidence between 55 and 65 years of age (4).

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Treatment for lung cancer depends on the cancer's specific cell type, how far it has spread, and the patient's performance status. Common treatments include palliative care, surgery, chemotherapy, and radiation therapy (5).

Chemotherapy essentially means the use of cytotoxic (cell-killing) medications to kill cancer cells or make them less active. It works by killing rapidly dividing cells. Since cancer cells divide more frequently than most cells, they are particularly susceptible to these drugs.

Some normal cells also divide continuously, such as hair follicles, the stomach lining, and the bone marrow that makes red and white blood cells. This accounts for many of the side effects experienced during chemotherapy, such as hair loss, nausea, and low blood cell counts. Different chemotherapy medications work at different stages of cell division. For this reason, often two or more medications are given at the same time to kill as many cancer cells as possible (6).

Every person experiences chemotherapy differently, both physically and emotionally. Each person experiences side effects from chemotherapy differently, and different chemotherapy drugs cause different side effects. Fortunately, as the science of lung cancer treatment has advanced, so has the science of managing treatment side effects.

The researcher asserts that the chemotherapy drugs have a side effect involve of all body systems of the patients in a variety of problems. Before the treatment the patients must know everything about the side effects of drugs and effect of chemotherapy upon his lifestyle (7).

The researcher believes that the nurse plays an important role in identify the effect of chemotherapy upon lifestyle for patients with pulmonary carcinoma and advising the patient about all aspects of patient needs after treatment with chemotherapy and for these reasons the researcher has prepared this research.

style for patients with pulmonary carcinoma. The questionnaire was constructed for the purpose of the study consisted of (90) items (Appendix A) which include two parts:

Part I: Patients' demographic characteristics: The first part concerned with determination of the demographic characteristics of these patients through designated sheet which include ten items, (age, gender, housing, marital status, level of education, occupation, income, method of taking the treatment, duration of the disease, and body mass index).

Part II: Questionnaire to side effect of treatment: This part is concerned with data to side effects of chemotherapy drugs upon patients with pulmonary cancer which include:

1. Side effects related to the physical examination consisted of (55) items.
2. Effects related to the psychological situation consisted of (18) items.
3. Side effects related to the personal and social status consisted of (12) items.
4. Effects related to the spiritual and religious beliefs consisted of (5) items.

The questionnaire to side effect of treatment were ordinal according to the three level scale which were scored as (never = 1, sometimes = 2, always = 3) for each level respectively so the cutoff point was (2).

Content validity was determined through the use of panel of experts.

Data collection: The data were collected by self-reporting by patients with lung cancer. For the period from 2nd to 30th Jan. 2012.

Statistical data analysis: Appropriate statistical approach is used that includes descriptive statistics (frequency, percentage, and mean of score) and inferential statistics (Chi-square (x2) test).

Methodology:

Objectives of the study: The study objectives to determine the effect of chemotherapy upon lifestyle for patients with pulmonary carcinoma. And to identify the association between the effect of chemotherapy upon lifestyle for patients and their demographic characteristics including (age, gender, housing, marital status, educational level, occupation and income).

Design of the study: Quantitative design (a descriptive study) was carried out to determine the effect of chemotherapy upon lifestyle for patients with pulmonary carcinoma.

Setting of the study: The study was conducted at the Medical City/ Baghdad Teaching Hospital; Al-Kadhimiya Teaching Hospital, and Radiation and Nuclear Medicine Hospital in Baghdad.

Sample of the study: A non-probability (purposive) sample of (50) patients who were reviewed the hospitals above to receive chemotherapy drugs to treatment disease.

Instrument construction: After extensive review of relevant literature which includes the effect of chemotherapy upon life-

Results:

Table 1. Distribution the sample according to demographic characteristics.

| No. | Variables | F. | % |
|-------|---|-----------|------------|
| 1. | (years) Age* | F. | % |
| 1.1. | Less than 20 | 2 | 4 |
| 1.2. | 20- 29 | 2 | 4 |
| 1.3. | 30- 39 | 4 | 8 |
| 1.4. | 40 - 49 | 11 | 22 |
| 1.5. | 50- 59 | 9 | 18 |
| 1.6. | 60 and more | 22 | 44 |
| | Total | 50 | 100 |
| 2. | Gender | F. | % |
| 2.1. | Male | 38 | 76 |
| 2.2. | Female | 12 | 24 |
| | Total | 50 | 100 |
| 3. | Housing | F. | % |
| 3.1. | Urban | 27 | 54 |
| 3.2. | Rural | 23 | 46 |
| | Total | 50 | 100 |
| 4. | Marital status | F. | % |
| 4.1. | Single | 10 | 20 |
| 4.2. | Married | 40 | 80 |
| | Total | 50 | 100 |
| 5. | Do you have children? | F. | % |
| 5.1. | Yes | 38 | 76 |
| 5.2. | No | 12 | 24 |
| | Total | 50 | 100 |
| 6. | Do you have children after the disease? | F. | % |
| 6.1. | Yes | 2 | 4 |
| 6.2. | No | 48 | 96 |
| | Total | 50 | 100 |
| 7. | Level of education | F. | % |
| 7.1. | Illiteracy | 19 | 38 |
| 7.2. | Able to read and write | 4 | 8 |
| 7.3. | Primary School graduate | 14 | 28 |
| 7.4. | Intermediate School graduate | 7 | 14 |
| 7.5. | High School graduate | 2 | 4 |
| 7.6. | Institute and College graduate | 4 | 8 |
| | Total | 50 | 100 |
| 8. | Occupation | F. | % |
| 8.1. | Student | 1 | 2 |
| 8.2. | Government employee | 3 | 6 |
| 8.3. | Retired | 7 | 14 |
| 8.4. | Self-employee | 8 | 16 |
| 8.5. | Other | 31 | 62 |
| | Total | 50 | 100 |
| 9. | Income | F. | % |
| 9.1. | Adequate | 23 | 46 |
| 9.2. | Not adequate | 27 | 54 |
| | Total | 50 | 100 |
| 10. | Method of taking the treatment | F. | % |
| 10.1. | Tablets | 12 | 24 |
| 10.2. | Intravenous | 14 | 28 |
| 10.3. | Both | 24 | 48 |
| | Total | 50 | 100 |
| 11. | Duration of the disease | F. | % |
| 11.1. | 1- 4 month | 47 | 94 |
| 11.2. | 5 - 8 month | 2 | 4 |
| 11.3. | 9 – 12 month | 1 | 2 |
| | Total | 50 | 100 |
| 12. | Body Mass Index | F. | % |
| 12.1. | Less than 20 | 10 | 20 |
| 12.2. | 20-25 | 26 | 52 |
| 12.3. | 26-30 | 12 | 24 |
| 12.4. | 31-35 | 2 | 4 |
| | Total | 50 | 100 |

F. =Frequency, %=Percent

Table (1) reveals that the majority (44%) of patients were (60) years old and more. (76%) of patients were male. (54%) of patients live in urban house. (80%) of patients were married. (76%) of patients have children, while (96%) of patients do not have children after the disease. Concerning the level of education (38%) was illiteracy. (62%) of patients has other

occupation. In relation to income (54%) of patients were not adequate. (48%) of patients use tablets and intravenous route to taking drugs. (94%) of patients suffering from disease for 1-4 month. (52%) of patients the body mass index ranged from 20 to 25.

Table 2. The mean of scores and significant to side effect of treatment for section: A. side effects related to the physical aspect.

| System | No. | Items | Never | | Sometime | | Always | | MS | S. |
|------------------|-----|---|-------|----|----------|------|--------|----|------|----|
| | | | f | % | f | % | f | % | | |
| Respiratory | 1. | Suffer from infections of the tonsils, pharynx repeated | 18 | 36 | 25 | 50 | 7 | 14 | 1.78 | S |
| | 2. | Suffer from recurrent chest infections | 22 | 44 | 19 | 38 | 9 | 18 | 1.74 | S |
| | 3. | Suffering from cough | 22 | 44 | 26 | 52 | 2 | 4 | 1.6 | S |
| | 4. | Suffer frequent sputum | 23 | 46 | 12 | 24 | 15 | 30 | 1.84 | S |
| | 5. | Experiencing difficulty in breathing | 17 | 34 | 29 | 57.9 | 4 | 8 | 1.74 | S |
| Nervous | 6. | Suffer from a lack of physical activity | 27 | 54 | 23 | 46 | 0 | 0 | 1.46 | NS |
| | 7. | Suffering from mental mixing | 13 | 26 | 21 | 42 | 16 | 32 | 2.06 | S |
| | 8. | Suffer from numbness parties upper and lower | 15 | 30 | 25 | 50 | 10 | 20 | 1.9 | S |
| | 9. | Suffering from a muscle spasm | 17 | 34 | 31 | 62 | 2 | 4 | 1.7 | S |
| | 10. | Suffer from chills | 5 | 10 | 23 | 46 | 22 | 44 | 2.34 | S |
| | 11. | Suffer from headaches | 14 | 28 | 31 | 62 | 5 | 10 | 1.82 | S |
| | 12. | Suffer from lack of ability to concentrate | 16 | 32 | 27 | 54 | 7 | 14 | 1.82 | S |
| Gastrointestinal | 13. | Suffer from gum thickening | 2 | 4 | 3 | 6 | 45 | 90 | 2.86 | HS |
| | 14. | Suffering from abdominal pain | 2 | 4 | 38 | 76 | 10 | 20 | 2.16 | S |
| | 15. | Suffer from burn in the stomach | 3 | 6 | 37 | 74 | 10 | 20 | 2.14 | S |
| | 16. | Suffer from mouth ulcers | 2 | 4 | 10 | 20 | 38 | 76 | 2.72 | HS |
| | 17. | Suffer from nausea | 7 | 14 | 30 | 60 | 13 | 26 | 2.12 | S |
| | 18. | Suffering from diarrhea | 5 | 10 | 28 | 56 | 17 | 34 | 2.24 | S |
| | 19. | Suffer from a lack of weight | 26 | 52 | 20 | 40 | 4 | 8 | 1.56 | S |
| | 20. | Suffer from loss of appetite | 25 | 50 | 17 | 34 | 8 | 16 | 1.66 | S |
| | 21. | Suffering from vomiting | 10 | 20 | 13 | 26 | 27 | 54 | 2.34 | S |
| | 22. | Experiencing difficulty in swallowing | 2 | 4 | 14 | 28 | 34 | 68 | 2.64 | HS |
| | 23. | Suffer from the change in taste | 4 | 8 | 29 | 57.9 | 17 | 34 | 2.26 | S |
| | 24. | Suffer from constipation | 1 | 2 | 28 | 56 | 21 | 42 | 2.4 | S |
| Musculo-skeletal | 25. | Suffer from back pain, bone and joints | 14 | 28 | 31 | 62 | 5 | 10 | 1.82 | S |
| | 26. | Easily suffer from bone fractures | 3 | 6 | 5 | 10 | 42 | 84 | 2.78 | HS |
| | 27. | Suffer from muscle weakness (fatigue) | 19 | 38 | 25 | 50 | 6 | 12 | 1.74 | S |
| | 28. | Suffer from pain in waists | 2 | 4 | 14 | 28 | 34 | 68 | 2.64 | HS |
| endo-crine | 29. | Suffer from the lunar face and obesity behind the neck, abdomen and shoulders | 4 | 8 | 11 | 22 | 35 | 70 | 2.62 | HS |
| | 30. | Suffer from high blood sugar | 8 | 16 | 16 | 32 | 26 | 52 | 2.36 | S |

| | | | | | | | | | | |
|----------------|-----|---|----|----|----|----|----|----|------|----|
| Cardiovascular | 31. | Suffer from palpitations | 18 | 36 | 25 | 50 | 7 | 14 | 1.78 | S |
| | 32. | Suffer from hypertension | 12 | 24 | 10 | 20 | 28 | 56 | 2.32 | S |
| | 33. | Suffer from the pain center of the chest and spread to the neck, shoulder and arm | 13 | 26 | 22 | 44 | 15 | 30 | 2.04 | S |
| Blood | 34. | Suffer from fatigue without effort | 34 | 68 | 14 | 28 | 2 | 4 | 1.36 | NS |
| | 35. | Suffering from bleeding in the nose (epistaxis) | 3 | 6 | 5 | 10 | 42 | 84 | 2.78 | HS |
| | 36. | Ease suffering from bleeding | 2 | 4 | 3 | 6 | 45 | 90 | 2.86 | HS |
| | 37. | Suffering from congestion of the face | 2 | 4 | 30 | 60 | 18 | 36 | 2.32 | S |
| | 38. | Suffer from exposure to infections easily | 14 | 28 | 27 | 54 | 9 | 18 | 1.9 | S |
| Genitourinary | 39. | Suffer from erectile dysfunction (impotence) | 15 | 30 | 13 | 26 | 22 | 44 | 2.14 | S |
| | 40. | Suffer from a lack of sexual desire | 18 | 36 | 18 | 36 | 14 | 28 | 1.92 | S |
| | 41. | Suffer from exposure to genital urinary tract infections | 14 | 28 | 23 | 46 | 13 | 26 | 1.98 | S |
| | 42. | Suffer from pain in the bladder | 7 | 14 | 19 | 38 | 24 | 48 | 2.34 | S |
| | 43. | Suffer from pain in the genital area | 9 | 18 | 11 | 22 | 30 | 60 | 2.42 | S |
| | 44. | Experiencing difficulty in urination | 6 | 12 | 26 | 52 | 18 | 36 | 2.24 | S |
| Skin | 45. | Suffer from delayed wound healing | 4 | 8 | 18 | 36 | 28 | 56 | 2.48 | S |
| | 46. | Suffering from acne | 1 | 2 | 6 | 12 | 43 | 86 | 2.84 | HS |
| | 47. | Suffer from hair loss | 6 | 12 | 17 | 34 | 27 | 54 | 2.42 | S |
| | 48. | Suffer from facial redness and pimples | 1 | 2 | 22 | 44 | 27 | 54 | 2.52 | HS |
| | 49. | Suffer from changing the strength of hair | 5 | 10 | 25 | 50 | 20 | 40 | 2.3 | S |
| | 50. | Suffering from tumors of the skin | 0 | 0 | 7 | 14 | 43 | 86 | 2.86 | HS |
| | 51. | Suffers from the appearance of hair in unwanted areas in the body | 2 | 4 | 10 | 20 | 38 | 76 | 2.72 | HS |
| | 52. | Suffer from skin infections | 5 | 10 | 32 | 64 | 13 | 26 | 2.16 | S |
| | 53. | Suffer from severe sensitivity to light | 15 | 30 | 18 | 36 | 17 | 34 | 2.04 | S |
| Vision | 54. | Suffer disturbances of vision | 21 | 42 | 23 | 46 | 6 | 12 | 1.7 | S |
| | 55. | Experiencing pain eye and eye socket | 13 | 26 | 26 | 52 | 11 | 22 | 1.96 | S |

M.S.: Mean of Scores, **H.S.:** Highly Significant, **S :**Significant , **Sig. :** Level of significance

The findings of table(2) indicated that the significant to side effect of treatment related to the physical aspect was non-significant on items (6 and 34) ,significant on items (1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20, 21,

23, 24, 25, 27, 30, 31, 32, 33, 37, 38, 39, 40, 41, 42, 43, 44, 45,47,49,52,53,54 and 55) , and high significant on items(13, 16,22,26,28,29,35,36,46,48,50 and 51).

Table 3. The mean of scores and significant to side effect of treatment for section: B. side effects related to the psychological aspect.

| No. | Items | Never | | Sometime | | Always | | MS | S. |
|-----|--|-------|----|----------|----|--------|----|------|----|
| | | f | % | f | % | f | % | | |
| 1. | Feel pessimistic about the future | 26 | 52 | 16 | 32 | 8 | 16 | 1.64 | S |
| 2. | Feel that life is difficult | 25 | 50 | 21 | 42 | 4 | 8 | 1.58 | S |
| 3. | Feel a desire to cry | 37 | 74 | 10 | 20 | 3 | 6 | 1.32 | NS |
| 4. | Feel remorse for your actions the previous | 22 | 44 | 19 | 38 | 9 | 18 | 1.74 | S |
| 5. | Feel sorry for yourself | 32 | 64 | 14 | 28 | 4 | 8 | 1.44 | NS |
| 6. | You feel you have become a secret passion | 14 | 28 | 28 | 56 | 8 | 16 | 1.88 | S |
| 7. | Bank is very concerned for the future of your family | 32 | 64 | 9 | 18 | 9 | 18 | 1.54 | S |
| 8. | Feel the loss your important when the other | 13 | 26 | 25 | 50 | 12 | 24 | 1.98 | S |
| 9. | Feel you are useless to your family | 17 | 34 | 23 | 46 | 10 | 20 | 1.86 | S |
| 10. | Feel the fear of disease | 34 | 68 | 11 | 22 | 5 | 10 | 1.42 | NS |
| 11. | Disturbed for no reason | 31 | 62 | 14 | 28 | 5 | 10 | 1.48 | NS |
| 12. | Suffers from disturbing dreams | 11 | 22 | 22 | 44 | 17 | 34 | 2.12 | S |
| 13. | Concerned about the length of treatment | 25 | 50 | 20 | 40 | 5 | 10 | 1.6 | S |
| 14. | Is fragmented and confused | 22 | 44 | 20 | 40 | 8 | 16 | 1.72 | S |
| 15. | Feel uncomfortable | 45 | 90 | 2 | 4 | 3 | 6 | 1.16 | NS |
| 16. | Having difficulty adapting to the disease | 27 | 54 | 18 | 36 | 5 | 10 | 1.56 | S |
| 17. | Suffer from sleep disturbances | 23 | 46 | 25 | 50 | 2 | 4 | 1.58 | S |
| 18. | Is terrified of the disease | 26 | 52 | 12 | 24 | 12 | 24 | 1.72 | S |

M.S.: Mean of Scores, **H.S.:** Highly Significant , **S :**Significant , **Sig. :** Level of significance

Table (3) shows that the significant to side effect of treatment related to the psychological aspect was non-significant on items (3, 5, 10,11,and 15) ,significant on items (1, 2, 4, 6, 7, 8,9,12,13,14,16,17,and 18) .

Table 4. The mean of scores and significant to side effect of treatment for section: C. side effects related to the personal and social aspect.

| No. | Items | Never | | Sometime | | Always | | MS | S. |
|-----|---|-------|------|----------|----|--------|----|------|----|
| | | f | % | f | % | f | % | | |
| 1. | Experiencing fear of the future | 34 | 68 | 10 | 20 | 6 | 12 | 1.44 | NS |
| 2. | Attention to yourself experiencing difficulty | 18 | 36 | 21 | 42 | 11 | 22 | 1.86 | S |
| 3. | Suffer from the impact of the disease on your work or study | 29 | 57.9 | 6 | 12 | 15 | 30 | 1.72 | S |
| 4. | Suffer the loss of financial security | 25 | 50 | 9 | 18 | 16 | 32 | 1.82 | S |
| 5. | Stop experiencing the fear of family support | 18 | 36 | 14 | 28 | 18 | 36 | 2 | S |
| 6. | Suffer change of family responsibilities | 17 | 34 | 19 | 38 | 14 | 28 | 1.94 | S |
| 7. | Changing family relationships suffer | 17 | 34 | 18 | 36 | 15 | 30 | 1.96 | S |
| 8. | Experiencing lack of social activities | 19 | 38 | 23 | 46 | 8 | 16 | 1.78 | S |
| 9. | Experience to rely on family members | 27 | 54 | 17 | 34 | 6 | 12 | 1.58 | S |
| 10. | Treatment of people suffering a difference to you about other | 18 | 36 | 21 | 42 | 11 | 22 | 1.86 | S |
| 11. | Experiencing unity | 19 | 38 | 21 | 42 | 10 | 20 | 1.82 | S |
| 12. | Suffers from the difficulty of social integration | 12 | 24 | 25 | 50 | 13 | 26 | 2.02 | S |

M.S.: Mean of Scores, **H.S.:** Highly Significant, **S:** Significant, **Sig. :** Level of significance, **NS:** Non significance

Table (4) reveals that the significant to side effect of treatment related to the personal and social aspect was non-significant on item (1), significant on items (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12).

Table 5. The mean of scores and significant to side effect of treatment for section: D. side effects related to the spiritual and religious beliefs aspect.

| No. | Items | Never | | Sometime | | Always | | MS | S. |
|-----|---|-------|----|----------|----|--------|----|------|----|
| | | f | % | f | % | f | % | | |
| 1. | Many mentioned the disease made you God Almighty | 41 | 82 | 6 | 12 | 3 | 6 | 1.24 | NS |
| 2. | Disease make you more anxious to perform the rituals of worship | 37 | 74 | 10 | 20 | 3 | 6 | 1.32 | NS |
| 3. | Disease made you more to read religious books | 10 | 20 | 13 | 26 | 27 | 54 | 2.34 | S |
| 4. | Disease make you more likely to be patient | 10 | 20 | 30 | 60 | 10 | 20 | 2.0 | S |
| 5. | Many of the disease made you stay away from the remembrance of God Almighty | 3 | 6 | 1 | 2 | 46 | 92 | 2.86 | HS |

M.S.: Mean of Scores, **H.S.:** Highly Significant, **S:** Significant, **Sig. :** Level of significance, **NS:** Non significance

Table(5) indicates that the significant to side effect of treatment related to the spiritual and religious beliefs aspect was non-significant on item (1 and 2), significant on items (3, and 4), while high significant on item (5).

Table 6. Association between age, gender, marital status, housing, level of education, occupation, income and the effect of chemotherapy upon lifestyle of patient's scores

| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
|--------------|------|---------|------|------------------------------|---------------------|------|
| | F | F | F | F | | |
| Age (years) | | | | | | |
| Less than 20 | 2 | 0 | 0 | 2 | 19.316 | S |
| 20- 29 | 0 | 2 | 0 | 2 | | |
| 30- 39 | 3 | 1 | 0 | 4 | | |
| 40 - 49 | 7 | 2 | 2 | 11 | | |
| 50- 59 | 1 | 7 | 1 | 9 | | |
| 60 and more | 5 | 16 | 1 | 22 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 10 | | % ² crit. = 18.31 | | |
| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
| Gender | F | F | F | F | | |
| Male | 17 | 19 | 2 | 38 | 5.858 | NS |
| Female | 1 | 9 | 2 | 12 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 2 | | % ² crit. = 5.99 | | |

| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
|--------------------------------|------|----------------|------|------------------------------------|---------------------|------|
| Housing | F | F | F | F | | |
| Urban | 11 | 14 | 2 | 27 | 0.573 | NS |
| Rural | 7 | 14 | 2 | 23 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 2 | | %² crit. = 5.99 | | |
| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
| Marital status | F | F | F | F | | |
| Single | 7 | 3 | 0 | 10 | 6.523 | S |
| Married | 11 | 25 | 4 | 40 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 2 | | %² crit. = 5.99 | | |
| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
| Level of education | F | F | F | F | | |
| Illiteracy | 3 | 16 | 0 | 19 | 22.988 | HS |
| Able to read and write | 0 | 4 | 0 | 4 | | |
| Primary School graduate | 7 | 5 | 2 | 14 | | |
| Intermediate School graduate | 3 | 2 | 2 | 7 | | |
| High School graduate | 2 | 0 | 0 | 2 | | |
| Institute and College graduate | 3 | 1 | 0 | 4 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 10 | | %² crit. = 18.31 | | |
| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
| Occupation | F | F | F | F | | |
| Student | 3 | 16 | 0 | 19 | 11.425 | NS |
| Government employee | 0 | 4 | 0 | 4 | | |
| Retired | 7 | 5 | 2 | 14 | | |
| Self-employee | 3 | 2 | 2 | 7 | | |
| Other | 2 | 0 | 0 | 2 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | df = 8 | | %² crit. = 15.51 | | |

| Scores | Good | Fair | Poor | Total | % ² obs. | Sig. |
|--------------|------|------|--------|-------|-----------------------------|------|
| Income | F | F | F | F | | |
| Adequate | 10 | 13 | 0 | 23 | 4.071 | NS |
| Not adequate | 8 | 15 | 4 | 27 | | |
| Total | 18 | 28 | 4 | 50 | | |
| P ≤ 0.05 | | | df = 2 | | % ² crit. = 5.99 | |

Fig. : Level of significance , HS=Highly Significant. NS=Non-significant. P=Probability value ,X²=Chi-Squared test, df=degree of freedom

Table (6) shows that there is high significant association between level of education of sample and the effect of chemotherapy upon lifestyle of patient's scores. And indicates that there is significant association between ages and marital status of sample and the effect of chemotherapy upon lifestyle of patient's scores. Also reveals that there is no significant association between income, occupation, and housing of sample and the effect of chemotherapy upon lifestyle of patient's scores.

Discussion:

Through the data analysis distribution of demographic variables table (1) reports that most of patients with pulmonary carcinoma are (60) years old and more and this account for 22 (44%).

This result is similar to the results obtained from study done by Fu, J. et al., 2005. These results indicate that the majority of age's patients with pulmonary carcinoma are diagnosis at age (55-64) years old (8).

Regarding gender of patients with pulmonary carcinoma 38(76%) of patients were male.

This finding is similar to the results obtained from study done by Centers for Disease Control and Prevention, 2009(9).

Concerning the housing most of patients with pulmonary carcinoma live in urban house 27 (54%). These findings are supported by Pinheiro, 2009. These results indicate that the majority of patients with pulmonary carcinoma are living in urban house (10).

With regard to the marital status of patients with pulmonary carcinoma, it is demonstrated that most of the patients were married 40 (80%). This finding is similar to the results obtained from study which indicates that most of patients with pulmonary carcinoma are married (11).

Thirty eight (76%) of patients have children, while (96%) of patients do not have children after the disease. This result is consistent with the study which indicates that the majority of patients do not have children after the disease (90%) (12).

In relation to level of education the majority of patients with pulmonary carcinoma 19 (38%) was illiteracy. This result is inconsistent with the study which indicate that in USA the ma-

jority of patients with pulmonary carcinoma are high School graduate (70%) (13).

The majority of patients in this study 31(62%) have other occupation. This result is in disagreement with study that the majority of patients in this study are working in industrial occupation (60%) as the working rules are different between the societies (14).

The researcher refers to the occupations related to industrial materials have great effect for injuries with lung cancer.

Twenty seven (54%) of patients the monthly income was not adequate. This result is in agreement with a study which indicates that in the majority of patients the monthly income is not adequate (65%) (15).

Twenty four (48 %) of patients use tablets and intravenous routes for administration of drugs. 47 (94%) of patients suffering from disease for 1- 4 month. This result is in agreement with a study which indicates that the majority of patients taking drugs of chemotherapy by intravenous administration and increase the suffering from side effects of chemotherapy (16). In relation to the body mass index of patients with pulmonary carcinoma most of patients are in range from (20 – 25 kg/m²) which accounts 26(52%). This result is inconsistent with the study which indicates that the majority of patients are above 25 (78%) (17).

Table (2) indicates that the significant to side effect of treatment related to the physical aspect was non-significant on items (suffer from a lack of physical activity and Suffer from fatigue without effort).

Significant on items (suffer from infections of the tonsils, pharynx repeated, suffer from recurrent chest infections, suffering from cough, suffer frequent sputum, experiencing difficulty in breathing, suffering from mental mixing, suffer from numbness parties upper and lower, muscle spasm, chills, headaches, lack of ability to concentrate, abdominal pain, burn in the stomach, nausea, diarrhea, a lack of weight, loss of appetite, vomiting, the change in taste, constipation, back pain, bone and joints, muscle weakness (fatigue), high blood sugar, palpitations, hypertension , the pain center of the chest and spread to the neck, shoulder and arm, congestion of the face, exposure to infections easily, erectile dysfunction (impotence), a lack

of sexual desire, exposure to genital urinary tract infections, pain in the bladder, pain in the genital area, experiencing difficulty in urination, delayed wound healing, hair loss, changing the strength of hair, skin infections, severe sensitivity to light, disturbances of vision and experiencing pain eye and eye socket).

High significant on items (Suffer from gum thickening, mouth ulcers, Experiencing difficulty in swallowing, Easily suffer from bone fractures, pain in waists, the lunar face and obesity behind the neck, abdomen and shoulders, bleeding in the nose (epistaxis), Ease suffering from bleeding, acne, facial redness and pimples, tumors of the skin and Suffers from the appearance of hair in unwanted areas in the body).

This result showed increase significant the side effects of chemotherapy on all systems of human body related to physical aspect.

The result of present study agrees with study done by Pathak, 2005, which indicates to increase side effect of chemotherapy for patients with pulmonary cancer especially these medication administration by intravenous? (18)

Table (3) shows that the significant to side effect of treatment related to the psychological aspect was non-significant on items (feel a desire to cry, feel sorry for yourself, feel the fear of disease, disturbed for no reason, and feel uncomfortable).

Significant on items (feel pessimistic about the future, feel that life is difficult, feel remorse for your actions the previous, feel you have become a secret passion, bank is very concerned for the future of your family, feel the loss your important when the other, feel you are useless to your family, suffers from disturbing dreams, concerned about the length of treatment, is fragmented and confused, having difficulty adapting to the disease, suffer from sleep disturbances, and is terrified of the disease).

The result of present study disagrees with study which indicates to increase side effect of chemotherapy for patients with pulmonary cancer especially these related to psychological aspect especially in feel pessimistic about the future, feel that life is difficult, feel remorse for your actions the previous, feel you have become a secret passion, bank is very concerned for the future of your family (19).

Table (4) reveals that the significant to side effect of treatment related to the personal and social aspect was non-significant on item (experiencing fear of the future).

Significant on items (attention to yourself experiencing difficulty, suffer from the impact of the disease on your work or study, suffer the loss of financial security, stop experiencing the fear of family support, suffer change of family responsibilities, changing family relationships suffer, experiencing lack of social activities, experience to rely on family members, treatment of people suffering a difference to you about other, experiencing unity, and suffers from the difficulty of social integration).

This result disagrees with study which showed, that high significant of score for all items of personal and social (20).

Table (5) indicates that the significant to side effect of treatment related to the spiritual and religious beliefs aspect was

non-significant on item (many mentioned the disease made you God Almighty and disease make you more anxious to perform the rituals of worship).

Significant on items (disease made you more to read religious books, and disease make you more likely to be patient).

High significant on item (many of the disease made you stay away from the remembrance of God Almighty).

This result agrees with study which showed that significant of score for items of spiritual and religious beliefs aspect? (19)

Table (6) indicates that there is significant association between ages of sample and the effect of chemotherapy upon lifestyle of patient's scores. This result agrees with study which indicated there were no significant differences between age of patients and the effect of chemotherapy upon lifestyle of patient's scores (21).

The study shows that there is no significant association between gender of sample and the effect of chemotherapy upon lifestyle of patient's scores.

This result agrees with results obtained from study which indicated that, there is no relationship between gender and the effect of chemotherapy upon lifestyle of patient's scores (22). Analysis of the result of the study shows that there is no significant association between housing of sample and the effect of chemotherapy upon lifestyle of patient's scores.

This result agrees with study which showed that there is no significant relationship between housing of sample and the effect of chemotherapy upon lifestyle of patient's scores (23).

There is significant association between marital status of sample and the effect of chemotherapy upon lifestyle of patient's scores.

These finding agree with results obtained from a study done by Robsahm, 2004. Which indicated that there is significant association between marital status of sample and the effect of chemotherapy upon lifestyle of patient's scores (24).

Regarding the relationship between level of education and the effect of chemotherapy upon lifestyle of patient's scores the present study indicates that there is high significant association between level of education of sample and the effect of chemotherapy upon lifestyle of patient's scores.

This result is in agreement with the study which indicates significant association between level of education of sample and the effect of chemotherapy upon lifestyle of patient's scores (25).

Analysis of the result of the study shows that there is no significant association between occupation of sample and the effect of chemotherapy upon lifestyle of patient's scores.

This result agrees with study which showed that there is no significant relationship between occupation of sample and the effect of chemotherapy upon lifestyle of patient's scores (25).

There is no significant association between income of sample and the effect of chemotherapy upon lifestyle of patient's scores.

These finding agree with results obtained from a study which indicated that there is no significant association between income of sample and the effect of chemotherapy upon lifestyle of patient's scores (24).

Conclusion:

The study concluded that most of patients with pulmonary carcinoma have side effects of chemotherapy related to the physical, psychological, personal and social, and spiritual and religious beliefs aspects.

Recommendations:

1. Dedicating funding, personnel and support to complemen-

tary medicine and nurse cancer research.

2. Making quality information more available to assist patients in making informed decisions about change life style after treatment with chemotherapy.

3. Increase health education with focusing on the effect side effect of chemotherapy upon life style and how to prevent these effects through T.V. programs, radio, newspaper, and medical magazines ...etc.

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تأثير العلاج الكيماوي على نمط حياة مرضى سرطان الرئة

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الخلاصة:

الهدف: تهدف الدراسة الى تحديد تأثير العلاج الكيماوي على نمط الحياة لدى المرضى المصابين بسرطان الرئة وتحديد العلاقة بين تأثير العلاج الكيماوي على نمط الحياة للمرضى والخصائص الديموغرافية التي تشمل (العمر، الجنس، السكن، الحالة الاجتماعية، المستوى التعليمي والمهنة والدخل الشهري).

المنهجية: تم اعتماد التصميم الكمي (دراسة وصفية) أجريت الدراسة في مدينة الطب/ مستشفى بغداد التعليمي؛ مستشفى الكاظمية التعليمي، مستشفى الاشعاع والطب والنووي للفترة الواقعة بين 1 كانون الاول 2011 ولغاية 5 شباط 2012. ولتحقيق أهداف الدراسة اختيرت عينة غرضية غير احتمالية مكونة من (50) مريض يرادعون المستشفيات اعلاه لتلقي العلاج وحسب معايير خاصة بهم، جمعت البيانات الخاصة بالدراسة من خلال التقرير الذاتي لكل مريض يعاني من سرطان الرئة وفق أستمارة تم بناؤها وتصميمها من قبل الباحثون لأغراض الدراسة الحالية. تم تحقيق ثبات أدوات القياس من خلال استخدام معامل ارتباط بيرسون والذي كانت (0,80). أما مصداقية أدوات القياس فقد تحققت من خلال عرضها على مجموعة من الخبراء لغرض مراجعتها وتقويم درجة مصداقيتها. قام الباحث باستخدام الإحصاء الوصفي (التوزيع التكراري والنسبة المئوية ومعدل القياس) والإحصاء الاستنتاجي (أختبار مربع كاي) لغرض تحليل بيانات الدراسة.

النتائج: أشارت نتائج الدراسة الى ان معظم المرضى الذين يعانون من سرطان الرئة لديهم آثار جانبية للعلاج الكيماوي تتعلق بالجانب الجسدي والنفسي، و المعتقدات الشخصية والاجتماعية، والروحية والدينية وذلك من خلال الزيادة المعنوية في الفقرات ذات الصلة بالآثار الجانبية من خلال التقييم لهذه الفقرات كما اوضحت الدراسة ليس هناك علاقة معنوية بين تأثير العلاج الكيماوي على نمط الحياة للمرضى والجنس، والسكن، والمهنة والدخل بينما هناك علاقة معنوية بين تأثير العلاج الكيماوي على نمط الحياة للمرضى والعمر والحالة الاجتماعية، والمستوى التعليمي.

الاستنتاجات: إستنتجت الدراسة الى ان معظم المرضى الذين يعانون من سرطان الرئة لديهم آثار جانبية للعلاج الكيماوي تتعلق بالجوانب الجسدية والنفسية والمعتقدات، الشخصية والاجتماعية، والروحية والدينية.

التوصيات: أوصت الدراسة على ضرورة جعل المعلومات أكثر جودة ومتاحة لمساعدة المرضى على اتخاذ قرارات حول نمط الحياة وتغييرها بعد العلاج الكيماوي.