

# MALIGNANCY IN BABYLON ONCOLOGY CENTERS (1990 - 2018)

<sup>1</sup>Dr. Sharif Fadhil Al-Alawachi, <sup>2</sup>Dr.Rida Muhi Alwash, <sup>3</sup>Dr.haider Mohsin, <sup>4</sup>Wisam Abdul Ameer, <sup>5</sup>Dr. Hussein Oleiwi Al-Dahmoshi, <sup>6</sup>Dr. Ali Helmi, <sup>7</sup>Dr.Mohammed Saeed Sharif Al-Alawchi, <sup>8</sup>Dr. Ali Sharif Al-Alawchi

**Abstract-** During the period (1990 – 2018 ) 18686 cases of malignancy were reported in Merjan Medical City Oncology Center as following :- 8634 (46.20%) cases were male and 10052 (53.79%) cases were female with the ratio of M: F equal to 1:1.15 It is concluded that the incidence of cancer is increasing in alarming way in the last (28) years. It is mainly due to the effect of Air, Water and Earth Pollution by the previous Wars on Iraq. This increasing incidence of cancer is associated with a younger age group especially with regard to Breast and Colonic carcinoma. However, high percentage of those malignant patients got good benefit by treatment with chemotherapy and /or Hormonal therapy in Babylon oncology center.The patients who need Radiotherapy were treated in Baghdad Radiotherapy Institute previously because the radiotherapy machines was under establishment in Babylon & in south of Iraq till the beginning of 2016 .

**Keywords-** Malignancy, Babylon, Oncology

## I INTRODUCTION

Cancer is now emerging as a major public health problem throughout the world. Annually it is estimated to affect at least 9 million people and kill 5 million (1, 2, 3).

At present, it accounts for about one-tenth of all death worlds (1-4). In Contrary to the wide believes that cancer is primarily a disease of industrialized nations, the burden of cancer is also increasing in developing countries (5). Several cancers including those of bladder, stomach, oral cavity, liver and uterine cervix is more known to be prevalent in developing and poor communities (6, 7). Moreover the global burden of cancer is heaviest in developing countries where almost 60% of cancer death had occurred (6).

In IRAQ, the effects of War, using of D.U, environmental pollution, the rapid spread of smoking and increase tobacco consumption are contributing to the increase magnitude of cancer in the country. Certain communicable

<sup>1</sup>Consultant Clinical Oncologist, Director of Imam Sadiq Hospital Oncology Center, Merjan Medical City Babylon Oncology Center, Al-Amal Al-watiny Hospital - Baghdad, Email: sh1956fa@yahoo.com, Mobile: 009647801006846

<sup>2</sup>Babylon Cancer Registry Center, M.B.Ch.B . D.M., Mobile: 00964 7805924250

<sup>3</sup>Director of Babylon Cancer Control Center, E-mail: haider.muhsin@gmail.com, Mobile:00964 7707276470

<sup>4</sup>Radiotherapist & chemist, Babylon Cancer Control center, E-mail: wisam\_ch@yahoo.com, Mobile: 00964 7803346187

<sup>5</sup>Babylon University, Science Faculty-Biology Department, E-mail: dr.dahmoshi@yahoo.com, Mobile: 00964 780 8530088

<sup>6</sup>Merjan Medical City/Babylon Oncology Center, M.B.Ch.B, E-mail: alihelmee@yahoo.com, Mobile: 00964 7813439479

<sup>7</sup>M.B.Ch.B, 2nd year Iraqi Board Histopathology, E-mail : saeed199045@yahoo.com, Mobile : 00964 7802571500

<sup>8</sup>M.B.Ch.B., Email:alisharif932008@gmail.com, Mobile: 00964 7903590794

diseases such as hepatitis B and schistosomiasis that are associated with increased occurrence of primary hepatocellular carcinoma and bladder neoplasm have also important roles. The tumor is defined as uncontrollable increment in the average division of normal tissue cells & its growth in unbalanced form with other cellular contents of certain organ ( Al- Alawachi & Other.2000). The cancer originate from changes in DNA of normal systemic cells which will change to malignant cells with uncontrollable division (Iraq Cancer Registry1999).

1. The causative agents of cancer are many which include familial ,diet , occupational , social , environmental agents (Sharif & Samah ,2004) .Some of the causative agents of increased registry of malignancy:-
2. Iraqi society face 3 wars in which weapons depleted uranium was used .
3. Bad Stress factor of Iraqi people.
4. Increase percentage of smoking people.
5. Effect of wars on the deficiency of diet to the people.
6. Increase ingestion of Alcohol & opiate.
7. Contact with chemical substances causing malignancy in chemical factory.
8. Entrance of colored industrial substances of the diet.
9. Familial factor of relative patients marriage.
10. Bilharzias esp. in south of Iraq .
11. Poor oral hygiene & low education .
12. Early diagnosis by available CT scan & MRI.
13. Increase education of early detection of cancer.(Devita, 1997,2004).

## **II THE INFORMATION OF BABYLON PROVINCE DIVISION AS FOLLOW**

1-Hilla discrete = Hilla center + Al- Kifil + Abu Garak.

2-Al- Musaiab discrete = Al- musaiab + Al –Haswa + Al- Sadda + Al- Iskanderia.

3-Al- Hashimia discrete = Al – Hashimia + Al – Kasim + West Hamza + Al-Shomeli.

4-Al Mahaweel discrete =Al- Mahaweel +Jballa +Al- Niel.

## **III THE AIM OF THE STUDY**

To study the prevalence, patient age& sex, histological type, and management especially the need for radiotherapy treatment (by Linear Accelerator ) of malignant cases registered in Babylon province oncology center during the period 1990 to 2018.

## **IV PATIENTS AND METHODS**

Data of malignant cases were obtained from cancer Oncology center , Merjan Teaching Hospital during the last 28 years from 1990 to 2018 were the information's of different malignant patient register in files in it all investigations, histology report, surgeon refereed report address, family report, past medical & surgical history report of the patient .

All these data analyzed and grouped in tables and drawn in figures and histogram to show the significance of increased number of malignancy per years from 1990 upward. The tables data seen by satiation searching for significant *P* value.

## V RESULTS

During the period (1990 – 2018 ) 18686 cases of malignancy were reported 8634 (46.20%) cases were male and 10052 (53.79%) cases were female with the ratio of M: F equal to 1:1.15 .

Table (1) shows the most frequent malignancy in both sexes during (1990-2018) in term of estimated numbers and percentage of total. The lung is the most frequent malignant site among men followed by cancer of urinary bladder, NHL and leukemia's. The breast is the leading cancer site in women followed by cancer of lung and bladder.

**Table 1:** shows the most frequent malignancy in both sexes during (1990-2018) in term of estimated numbers and percentage of total.

**Table 2:** shows the annual number of new cancer cases registered in Babylon during (1990-2018). There is a significant relationship exist between years and number of cancer cases registered in

1990-2010		2010-2013		2014		2016		2018	
Site affected	%	Site affected	%	Site affected	%	Site affected	%	Site Affected	%
1-Breast malignant	19.85	BREAST	23.0	BREAST	25.5	BREAST	24.5	BREAST	36.0
2- Bronchus	7.61	BLOOD	14.1	BLOOD	10.9	BRONCHUS	15.0	BRONCHUS	19.5
3-Ur. Bladder	6.05	BRONCHUS	13.0	BRONCHUS	10.8	BLOOD	7.0	BLADDER	10.5
4- NH Lymphoma	5.80	LYMPH NODES	6.3	LYMPH NODES	7.7	BLADDER	5.2	COLON	6.9
5- Leukemia	5.64	COLORECTAL	5.2	BLADDER	5.5	LYMPH NODES	4.9	UTRAUS	5.5
6-larynx	4.53	BLADDER	5.0	PROSTAT	5.5	GALL BLADDER	3.7	L.N	4.5

Babylon, *r* (correlation coefficient) = 0.842 (P<0.001).

7-Bone and S.T. S	4.17	STOMACH	3.6	COLON	4.9	COLON	3.3	PROSTAT	4.5
8-Colorectal	3.63	PANCREAS	3.1	STOMACH	3.1	OVARY	3.0	OVARY	3.6
9- <b>Years</b>		<b>No. Of cases</b>		<b>Male</b>		<b>Female</b>			
9-Hodgkin's diseases	3.63	Registered OVARY	2.8	No. PANCREAS	% 2.8	PROSTAT No.	2.7	% Pancreas	3.5
10-1990		82		43	52.4	39		47.6	
10-1991		160		98	61.25	62		38.75	
10-1992	3.6	KIDNEY	2.4	133	53.2	117	2.5	SKIN	46.8
1993		333		172	51.56	161		48.34	
1994		337		179	53.11	158		46.88	
1995		300		157	52.48	143		47.52	
1996		346		181	52.29	165		47.71	
1997		339		176	51.92	163		48.08	
1998		350		182	51.92	168		48.98	
1999		378		194	51.28	184		48.72	
2000		415		224	53.97	191		46.03	
2001		447		241	53.91	206		46.09	
2002		300		155	52	145		48	
2003		378		167	44.2	211		55.8	
2004		594		311	52.00	283		48.00	
2005		678		288	42.00	390		58.00	
2006		983		420	47.60	563		52.40	
2007		1025		427	42.00	598		58.00	
2008		911		403	44.20	508		45.80	
2009		936		406	43.40	530		46.60	
2010		979		434	44.30	545		45.70	
2011		996		453	45.5	543		54.5	
2012		921		396	43.0	525		57.0	
2013		931		409	44%	522		56%	
2014		850		370	43%	480		57%	
2015		964		414	48%	550		52%	
2016		850		396	46.55%	454		53.45%	
2017		1649		803	48.70	846		51.30	
2018		1004		402	41%	602		59%	

<b>Sum</b>	<b>18686</b>	<b>8634</b>	<b>46.20%</b>	<b>10052</b>	<b>53.79%</b>
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The annual number of new malignant cases registered in Babylon during (1990-2018) were displayed in the table(2).

<b>1990 : 82 → 2018 : 18686 58 % = 0.85 100-0.58= 99.42 =99.5 ( percent of increment)</b>
<b>patient to outside Iraq (Iran , India , Turkey , lebnon and Jordin) for PET scan &amp; treatment</b>

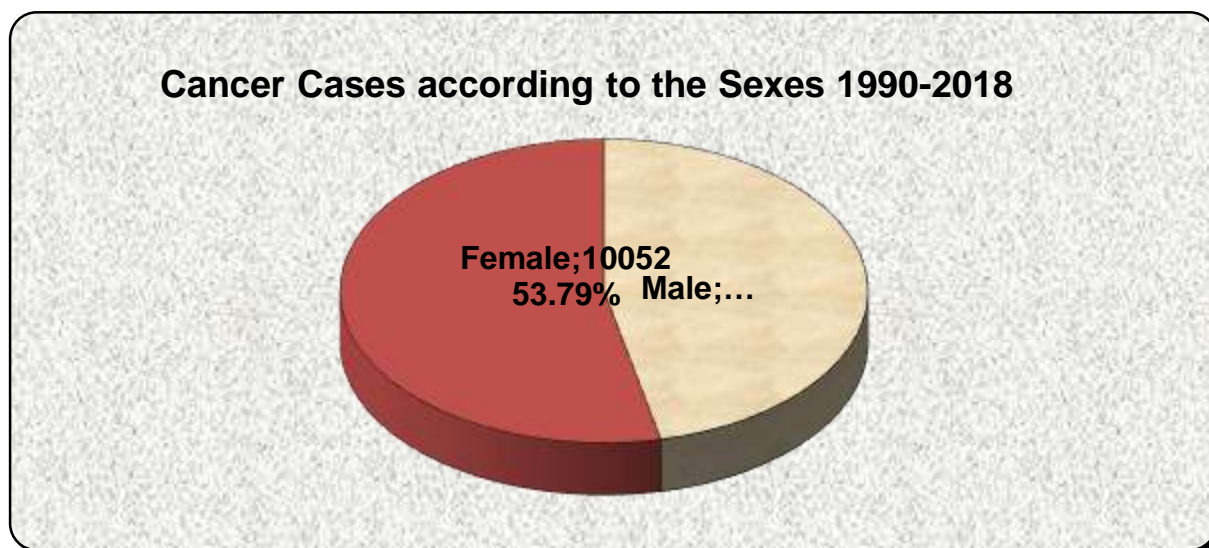


Table (3) shows the summary of treatment policy of malignant cases in the Babylon Oncology Center and Radiotherapy institute - Baghdad. It shows that high percentage of those malignant patients got good results by treatment with Chemotherapy and/or Hormonal therapy in Babylon and those who need Deep X-Ray Therapy treated in Baghdad Radiotherapy institute because of unavailability of radiotherapy equipment in Babylon and other provinces of the south of Iraq .

**Table 3:** shows the summary of treatment policy of malignant cases in the Babylon Oncology unit and Radiotherapy institute - Baghdad

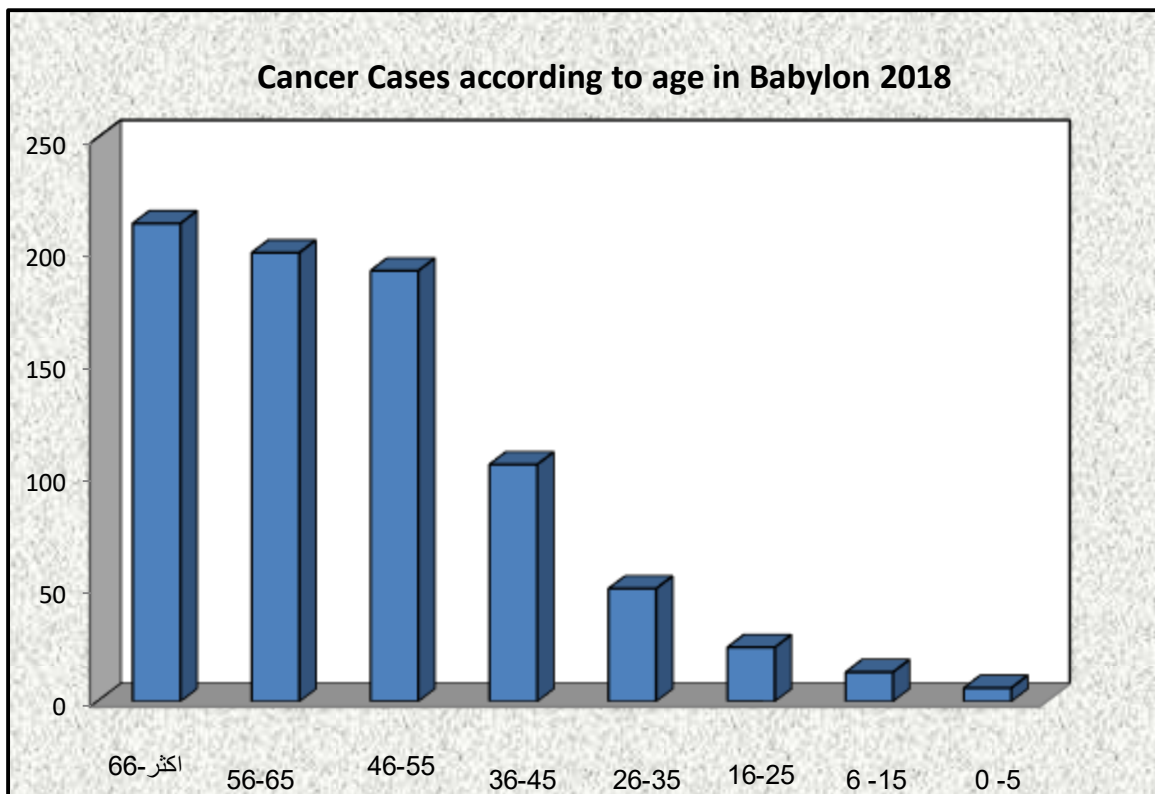
	<b>Primary Site</b>	<b>Chemo T.</b>	<b>Radio T.</b>	<b>Radio isotops</b>	<b>Hormonal therapy</b>	<b>Immuno T.</b>
1	Breast	++	+++	-	+	-
2	Bronchus	++	+++	-	-	-
3	Urinary Bladder	++	+++	-	-	+
4	NHL	+++	+	-	-	-
5	Leukemia	+++	++	-	-	-
6	Larynx	+	+++	-	-	-

7	Bone & C.T.	+++	++	-	-	-
8	Colon	++	-	-	-	-
9	HL	++	+++	-	-	-
10	Skin	+	++	-	-	-
11	Malignant without specific site	+	+	-	-	-
12	Stomach	+++	-	-	-	-
13	CNS	+	+++	-	-	-
14	Nasopharynx	+	+++	-	-	-
15	Pancreas	+++	-	-	-	-
16	Thyroid	+	+++	++	+	-
17	Uterus	++	+++	-	+	-
	Cervix	+++	-	-	-	-
	Placenta	+	+++	-	-	-
18	Prostate	+	++	-	+++	-
19	Liver	+++	-	-	-	-
20	Kidney	++	+++	-	+	+
21	Ovary	+++	++	-	-	-
22	Testis	+++	++	-	-	-
23	Gall Bladder	++	-	-	-	-
24	Oesophagous	+	++	-	-	-
25	Tongue	+	++	-	-	-
26	Eye	+	+++	-	-	-
27	Lip	-	+++	-	-	-
28	Parotid	+	+++	-	-	-
29	Gum	+	+++	-	-	-

**Table 4:** No.of Cancer Cases according to the Age (2018 )in Babylon

Age	Percentage
5← 0	0.8
15← 6	1.6
25←16	3.0
35←26	6.3
45←36	13.1
55←46	23.9

65←56	24.9
up←66	26.5
Total	100.0



## VI DISCUSSION

- 1- It is found that the presence of CT scan & MRI machines help people to search for early diagnosis of their disease so the tumor will be found early before death and that will lead to register large number of malignancy searching for radical treatment of that disease.
- 2- From the seen data it was noticed that the malignancy with high percentage as the Breast, Lung, U. Bladder, have relation with wrong social, Diet factors need increased public health education for early attendance to the doctor clinic for early diagnosis.
- 3- In the years after last War, the numbers of registered cases are high due late effect of environmental pollution.
- 4- Children and young patient affected with malignancy more in Iraqi studies rather than other people in western once.
- 5- Babylon province has high number of malignancy registry more than other mid-Euphrates area provinces due to presence of Oncology Center in Merjan Medical City.

## VII RECOMMENDATIONS

- 1- Periodic investigations of the workers in industrial regions of mid Euphrates area.
- 2- Test the tanned and canned food and color substances added to the diet and increased health watching to it.
- 3- Increased advertising of health people education advising them for attendance to the early diagnosis of malignancy clinic in the hospitals.
- 4- It must be certify to establish the industrial region and factories far away from the center of the crowded people city.
- 5- Increase Education to the people to stop smoking and not allow for smoking Advertisement.
- 6- Ask the road officer not allow for old cars to move in the street of the city due to its bad hydrocarbons deposits to improve inspired environmental air of the people.

## VIII CONCLUSION

It is concluded that the incidence of malignancy is increasing in alarming way in the last 27 years. It is mainly due to the effect of environmental Pollution (i.e. Air, Water and Earth Pollution ) from the previous Wars in Iraq. This increasing incidence of malignancy is associated with a younger age group ( 0→5 years=0.8% , 6→15=1.6%, 16→25=3% , 26→35=6.3% , 36→45=13.1% , 46→55=23.9% , 56→65=24.9% , 66→up=26.5%) especially with regard to Breast and GIT malignancies; however, high percentage of those malignant cases (Breast 36.0% , Bronchus 19.5% , Bladder 10.5% , Colon 6.9%, Utraus 5.5%, L.N 4.5%, Prostate 4.5%, Ovary 3.6%, Pancreas 3.5%, Skin 3.2% , Blood 2.1%) got good benefit by treatment with chemotherapy and or Hormonal therapy in Babylon Oncology Center and radiotherapy in Baghdad Radiotherapy Center .

The study recommended the need to increase awareness and health education for citizens to quit smoking and examination of food cans and conduct tests for workers in the factories, and make the industrial areas away from the city centers of the Middle Euphrates region and the emphasis on Gentlemen Officials in the Departments of Traffic not to allow the old vehicles to travel in the provinces streets which discharge smoke and exhaust carbon in the air inhaled by people whose patients suffering from cancer.

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