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Global Pancreas Cancer Indicators: As a Lowest Survival Rate

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Abstract: Background: According to global indicators, pancreatic cancer is one of the types whose recovery is very limited, but scientific development and cases of early detection of the disease have increased the survival rate depending on the affected area in the body. This paper examines one of the types of cancers with very low survival rates and analyzes its indicators by regions for males and females, supported by illustrations with reference to the top ten cancers in Iraq, including pancreatic cancer.
Material & Methods: Publications from (WHO, International Agency for Research & Cancer, Cancer Today 2024) on the incidence and mortality male and female of pancreas cancer in global Continents and UN regions were used, with a comparison made to finding their indicators, illustrated with charts.
Results: The results of the analysis showed that this type of cancer still claims the lives of many people and that the global survival rate does not exceed (10%), despite the advancement of medical technology.
Conclusion: Pancreatic cancer is one of the deadliest cancers; however, health and social care can have an impact on increasing survival rates, medical development this type of cancer has not been able to reach a solution and a cure that increases survival rates, although the cases of incidence are limited compared to other types of cancers.

Keywords: Healthcare, Incidence, Mortality, Treatments, Epidemic, Diagnostics, Cumulative Risk, Crude Rate.

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Introduction

Pancreatic cancer is an abnormal growth of cells in the tissues of the pancreas, and there are two types: adenocarcinoma, which is the most common and originates in the exocrine glands, which is the most aggressive type, difficult to diagnose and spreads rapidly to the rest of the body (1). The second type is pancreatic euroendocrine cancer, this type originates in hormone-producing cells (2). Pancreatic cancer occurs due to DNA damage and can occur because of genetic mutations and the main cause of the disease cannot be determined. This paper is looking for indicators of the disease that kills many people, and reduces survival rates based on data issued by the World Health rganization, analyzing its indicators,

comparing them by regions in the world with reference to cancer diseases in Iraq, including pancreatic cancer (3, 4).

Some symptoms can appear in the advanced stages of the disease, such as, loss of appetite, blood clotting, depression, diarrhea, enlarged gallbladder, stomach pain, shortness of breath, weight loss (5, 6). Old age, obesity, diabetes, pancreatitis, smoking, alcohol, family history are the most important risk factors for the disease (7). The diagnosis of the disease is not easy because of the ambiguity of the symptoms of the disease in the early stages, it is necessary when there is a family history to visit the specialist every period to do the necessary tests and examinations such as computed tomography, magnetic resonance imaging, ultrasound examination (8, 9). The disease can be prevented through permanent screening and a healthy diet rich in fruits and vegetables, avoiding smoking, regular exercise, avoiding red meat and alcohol. Treatment depends on the type and stage of the disease, in case of high prevalence, surgical removal or radiation therapy is performed to destroy cancer cells, or chemotherapy using some drugs injected into a vein (10-12).

Top 15 Cancer Sites

Figure (1) shows the fifteen highest sites of cancer in the world in terms of the number of incidence and mortality rate, lung cancer occupied the highest incidence (2480675) with the highest mortality rate also (1817469), followed by breast cancer with the number of incidence (2296840) with a lower mortality rate (666103), then colorectum cancer with the number of incidence (1926425) with a mortality rate (904019), the lowest cancer of the fifteen is corpus uteri (420368) with a mortality rate (47,723). The highest survival rate was in thyroid cancer (94%), followed by corpus uteri (77%), prostate (73%), breast (71%), kidney and bladder (64%). The cancers with the lowest survival rates are: pancreatic (9%), Liver (12%), Esophagus (13%), Figure (2)(13).

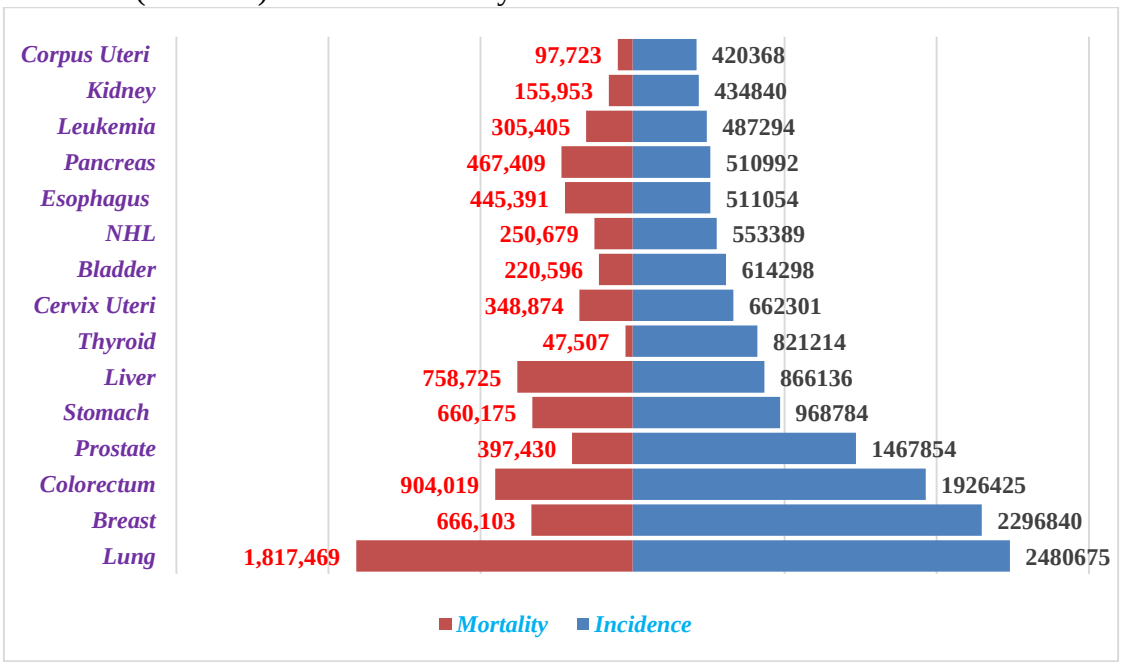

Figure (1): Top 15 Cancer Sites, Incidence and Mortality

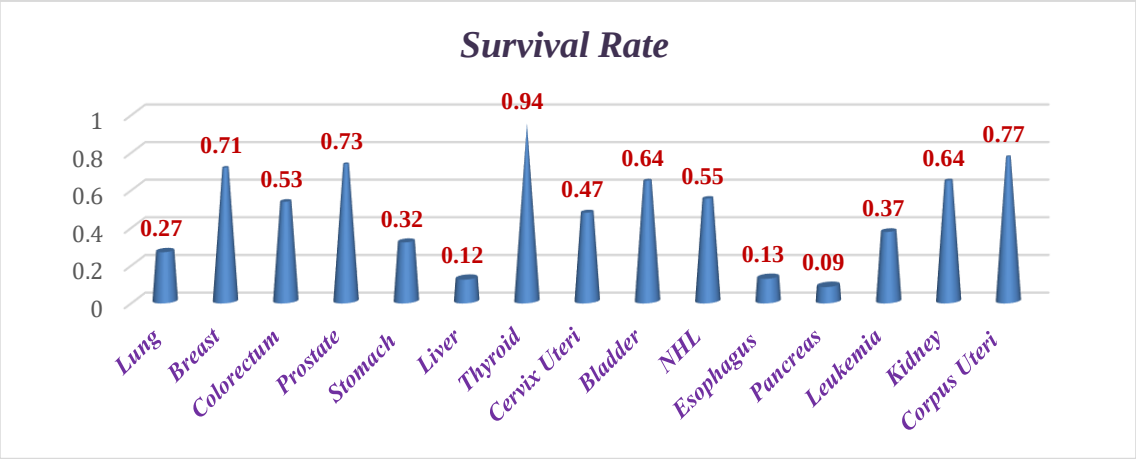

Figure (2): Top 15 Cancer Sites Survival Rate

The highest absolute numbers, incidence, and mortality both sexes for age (0-74), was in eastern Asia, followed by northern America, then eastern and western Europe, south central Asia, south America, then the pyramid become in a decreasing pattern, the lowest were, middle Africa, Caribbean and southern Africa, figure (3) (13,14).

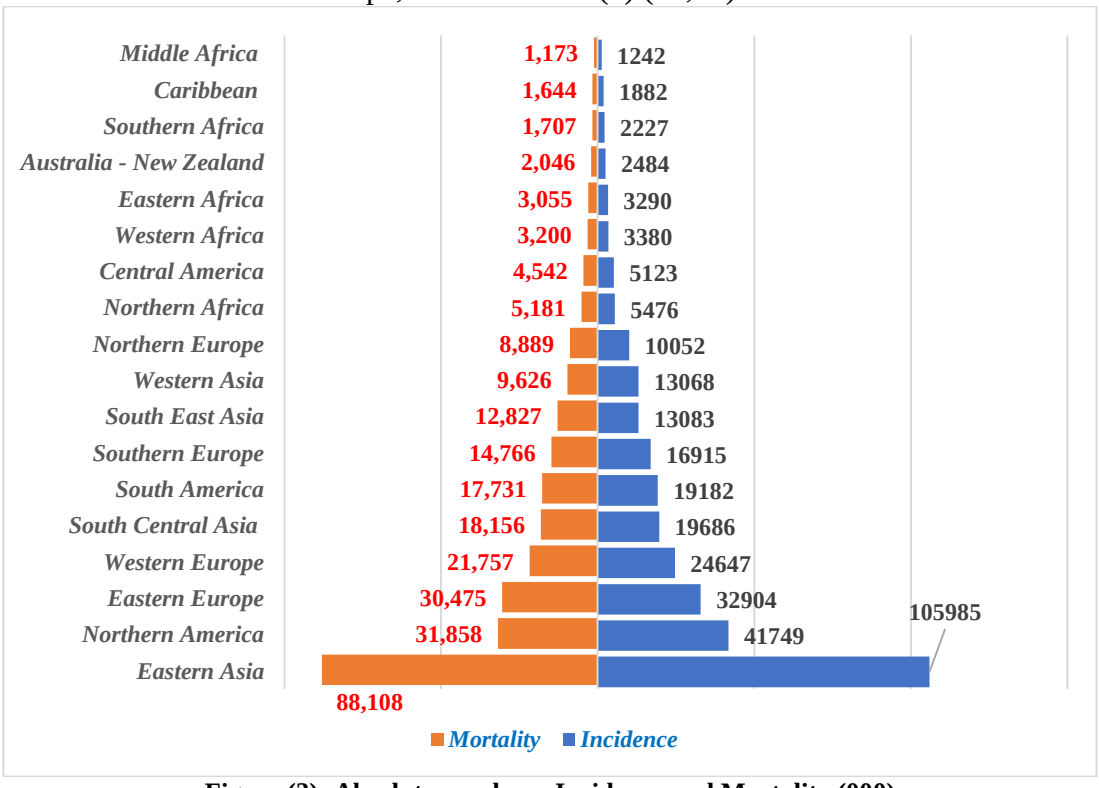

Figure (3): Absolute numbers, Incidence and Mortality (000)

The highest survival rate was in western Asia (26%), followed by north America (24%), south Asia (23%), Australia – New Zealand (18%), eastern Asia (17%). The lowest survival rates regions are: south east Asia (2%), western and northern Africa (5%), middle Africa (6%), and eastern Europe (7%), Figure (4) and (5) (13, 15, 16).

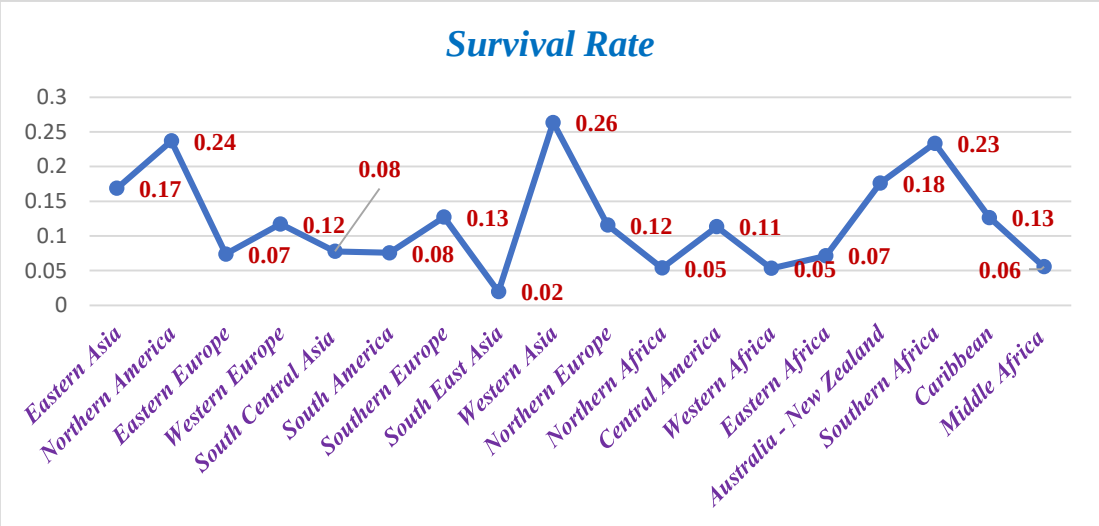

Figure (4): Absolute numbers, Incidence and Mortality Survival Rate

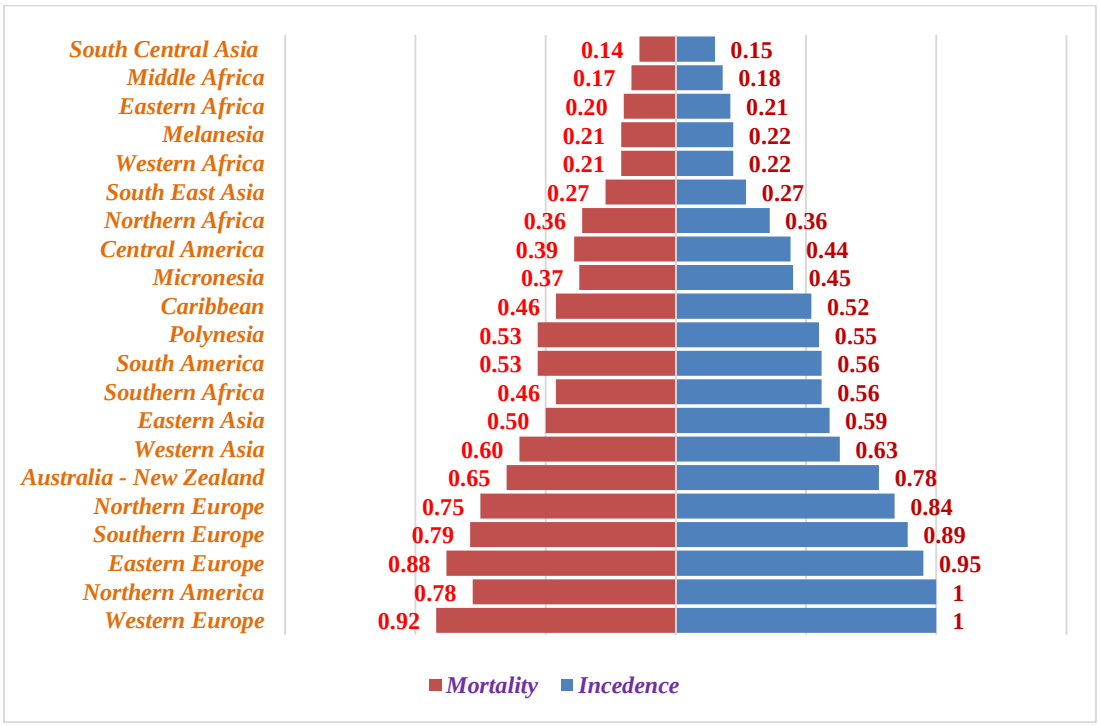

Figure (5): Estimated Cumulative Risk (%)

The highest estimated cumulative risk (%) incidence & mortality both Sexes age (0 – 74), UN regions were in all Europe regions and north America; western Europe (100%, 92%), north America (100%, 74%), eastern Europe (95%, 88%), southern Europe (89%, 79%), northern Europe (84%, 75%). The lowest cumulative risk was in south central Asia (15%, 14%), middle and eastern Africa (18%,17%), (21%,20%), it seems incidence and mortality are very close percentage (13, 17)

The highest crude rate per (100000) incidence & mortality, both Sexes 2022, were in al Europe regions and north America; western Europe (24.3, 23.1), southern Europe (21.8, 20.5), northern Europe (18.6, 17.4), north America (18,15), eastern Europe (15.7, 14.9). The lowest crude rate was in middle (0.75, 0.71), eastern (0.85, 0.8), and

southern (0.94, 0.89) Africa, it also seems incidence and mortality are very close percentage. Figure (6) (13, 15).

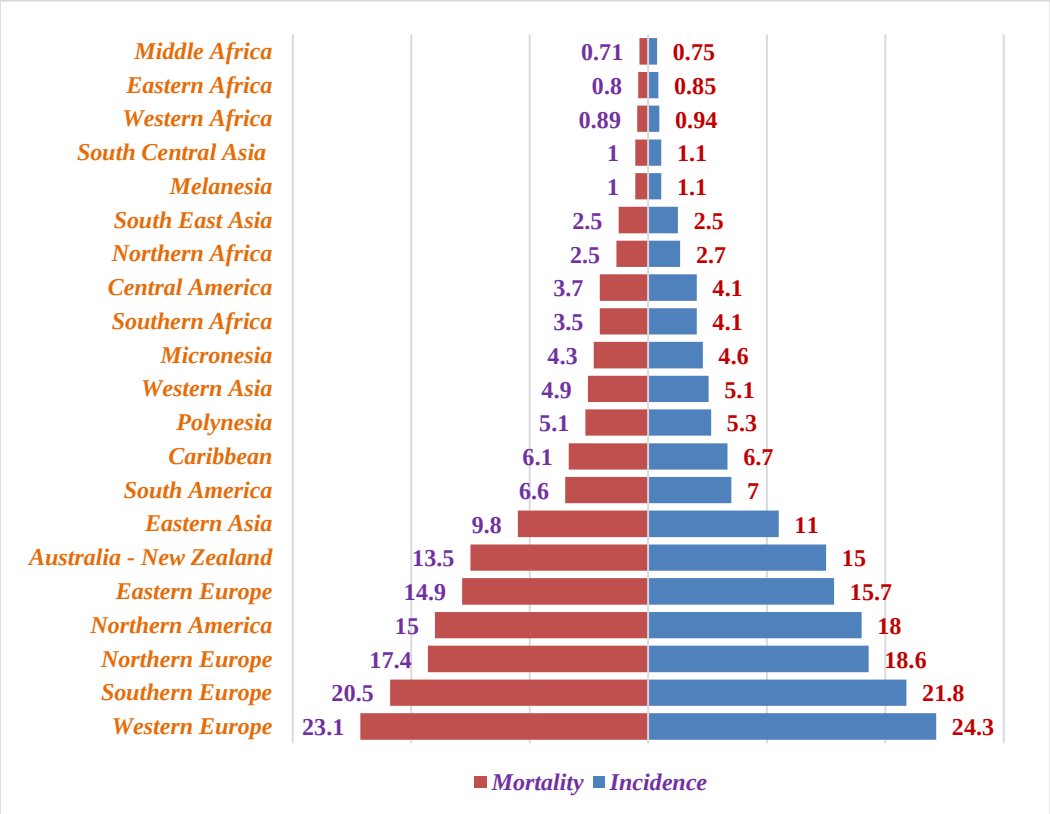

Figure (6): Crude Rate per (100000) Incidence & Mortality

Highest countries Incidence & Mortality Male & female

The highest ten countries incidence & mortality male, female, shown in table (1). The female incidence and mortality were less than male. China ranked the highest, followed by USA, then Japan, Germany, Russia, India, France, Brazil, Italy, and UK. The highest survival rate was in USA (18%), followed by China (10%), Japan (9%), other seven countries are almost equally likely. The global survival rate was (9%). Figure (7) (14, 18-25).

Table (1): Highest ten countries Incidence & Mortality Male & female 2022

Regions	*Incidence*		*Mortality*		*Total*		*Survival Rate*
	Male	*Female*	*Male*	*Female*	*Incidence*	*Mortality*	
China	67123	51549	61071	45224	118672	106295	0.10
USA	31598	28529	26054	23437	60127	49491	0.18
Japan	23609	24018	20755	22510	47627	43265	0.09
Germany	10970	10899	10775	10517	21869	21292	0.03
Russia	10561	11261	10048	10624	21822	20672	0.05
India	8712	4949	8136	4623	13661	12759	0.07
France	7911	7984	7696	7473	15895	15169	0.05
Brazil	7504	7166	7295	6999	14670	14294	0.03
Italy	7499	8211	7037	7866	15710	14903	0.05
UK	5786	5565	5496	5273	11351	10769	0.05
World	269709	241283	247589	219820	510992	467409	0.09

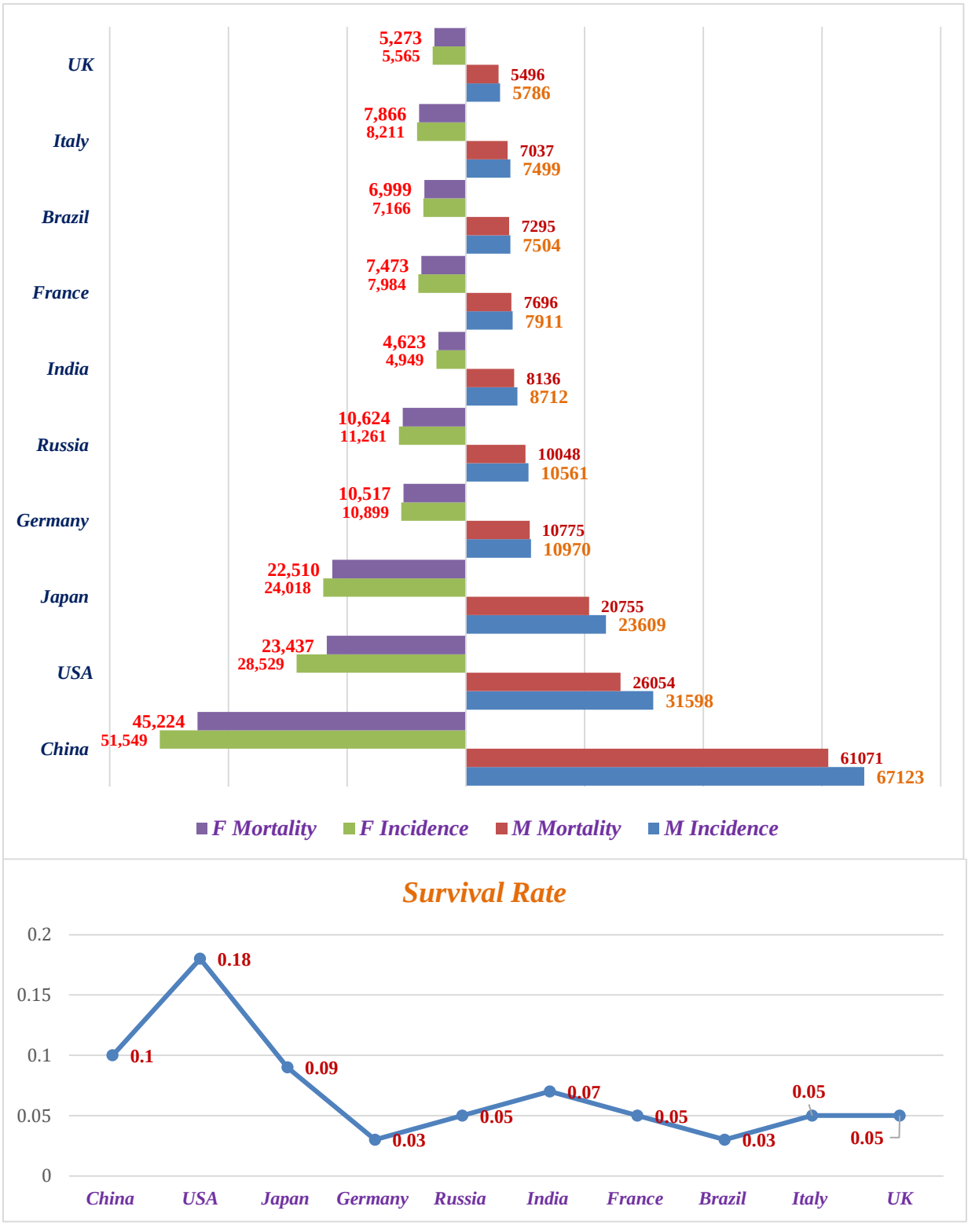

Figure (7): Highest ten countries Incidence & Mortality Male & female Survival Rate

Continents Incidence and Mortality Male, female

Table (2) shows the incidence and mortality, male female by continents, it seems that female about half in incidence and mortality of male. The highest was in Asia, followed by Europe, then north America, Latin America and Caribbean, Africa, and Oceania as the lowest. The highest survival rate was in north America (16%), other Continents almost equally likely. Figure (8)(14, 26-37).

Table (2): Incidence & Mortality Male, female for by Continents 2022

Regions	Incidence		Mortality		Total		Survival Rate
	Male	Female	Male	Female	Incidence	Mortality	
Asia	232537	128664	212243	118145	361201	330388	0.08
Europe	146477	72977	138644	69232	219454	207876	0.05
North America	67099	35175	56044	29382	102274	85426	0.16
Latin America & Caribbean	41032	20228	38319	18869	61260	57188	0.07
Africa	18993	10278	17770	9640	29271	27410	0.06
Oceania	4864	2387	4389	2321	7251	6710	0.07

Source: World Research Cancer Fund 2022

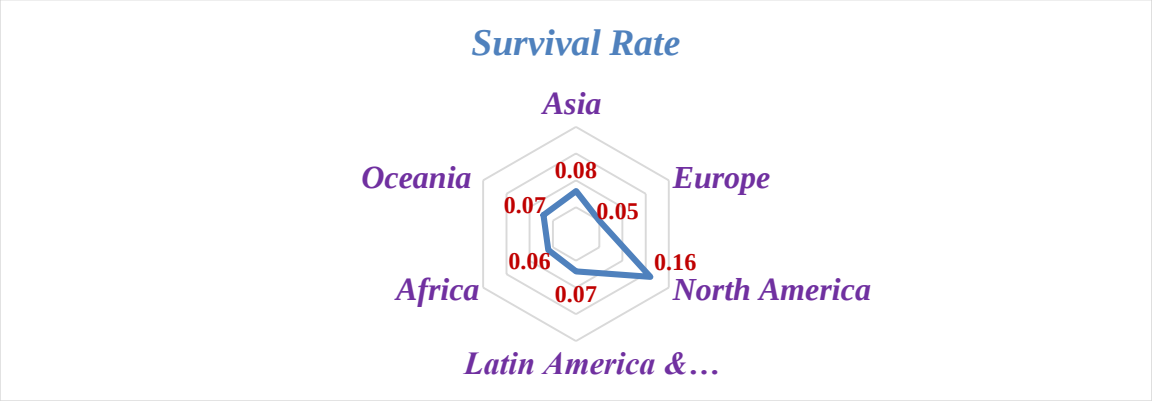

Figure (9): Incidence & Mortality Male & female for by Regions Survival Rate

Cancers Indicators in Iraq

Iraq has been exposed to a series of wars, conflicts for four decades, this has led to environmental pollution resulting in various cancer incidence and mortality, and Iraq is still suffering from the impact of this on the public health of society, and the difficulty of keeping up with integrated health care because of this. According to the statistics of the World Health Organization, the number of cases of cancer has reached (37382) cases, of which (15824) are for males, and (21558) are for females, i.e. there is an increase of (36%) for females than for males. The number of cancer deaths (21,536) cases, of which (10,403) cases were male, (11,133) for females by (7%) higher than males, that is, the survival rate for all cancer cases was (43%). Figure (10) shows the top ten sies of cancers in Iraq for incidence and mortality, as breast cancer ranked the highest incidence (3372) cases, followed by lungs (2613) cases, and the lowest is the pancreas (752). Figure (11) shows the survival rate, with pancreatic cancer occupying the lowest rate (2%), followed by lungs (7%), brain and stomach (16%), leukemia (25%), colorectum (38%), NHL (48%), kidney (51%), breast (61%), and thyroid (86%) (13).

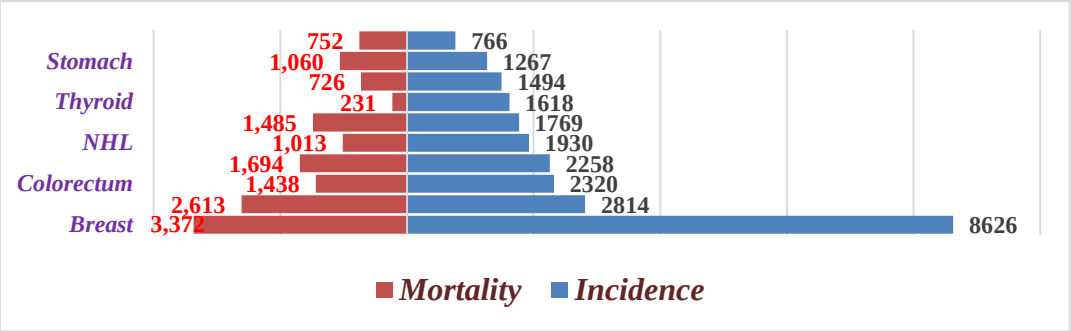

Figure (10): Highest Cancers site in Iraq

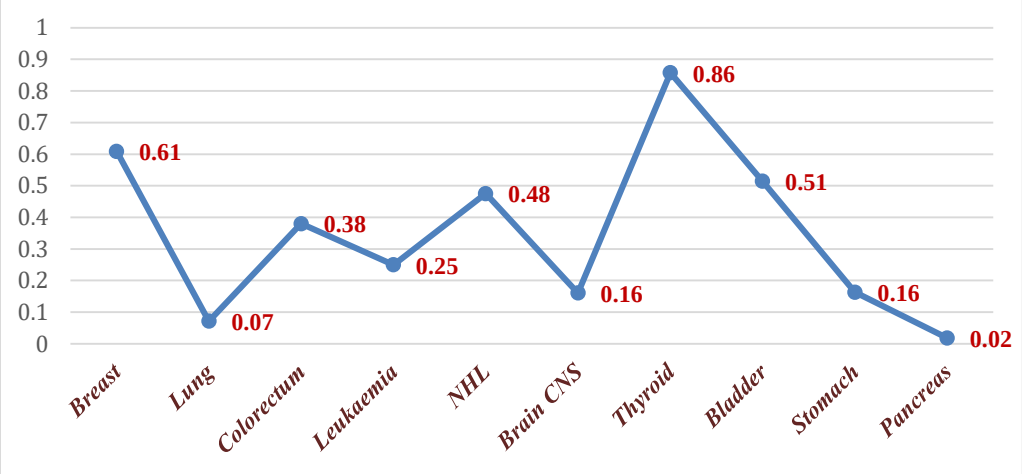

Figure (11): Survival Rate in Iraq

Conclusion

Pancreatic cancer is known as the silent killer because there are no early symptoms or diagnosis, this type has the lowest accelerated survival for a period of less than ten years compared to other cancers. Pancreatic cancer is considered the deadliest cancer in the world and this disease occurs when pancreatic cells multiply out of control and result in a mass of tissue, this mass can be benign or malignant. In view of the data analysis and the survival rate, regular health care should be followed and special awareness campaigns should be carried out for people with a medical history.

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