



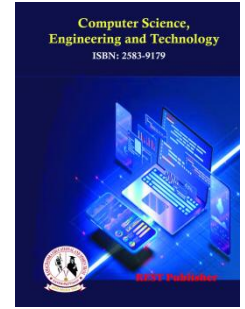
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Using the COPRAS Methodology Cancer with a solution

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Abstract: The second greatest cause of mortality in the United States and a significant global public health issue is cancer. In this article, we provide a detailed summary of cancer incidence as well as the anticipated number of new cancer cases and cancer-related fatalities in the United States nationwide and in each state in 2019. For cancer incidence through 2015 and mortality through 2016, the most recent population-based data are available. We also calculate the overall number of deaths that have been saved as a result of the steady drop in cancer mortality rates since the early 1990s and examine cancer mortality rates in relation to county-level poverty. Cell cycle regulation that is out of control is a key characteristic of cancer. In a Jiangsu Province, China, location with a low incidence rate, the current study identified a variety of risk and preventive factors for esophageal and stomach cancer. In the entire world, colorectal cancer is the third most prevalent cancer in women and the fourth most common disease in males. Previously a disease that required reporting, lung cancer is now the number one cancer killer of both men and women in developed countries. Nearly 500,000 women worldwide receive a cervical cancer diagnosis each year, making it a significant public health concern. However, this descriptive study is significant because it offers population-based proof that is beneficial in treating female breast cancer in the absence of randomised clinical trials on the effectiveness of among men with breast cancer. The final point is that both general breast cancer prevention and treatment will benefit from a thorough understanding of the secular and age-related links between male and female breast cancers. The COPRAS system was developed by Vilnius Ked Minas University of Technology scientists Zavatskas and Kalkaska's and first published in their respective article. The essential principle of the method lays in the possibility of combining the ridge values of all indicators of R qualitative account, that is, the value of the method criterion. Calculations based on COPRAS method are performed using classical normalization. Different MCDM methods are used for different decision making process. Complex proportionality Rating (COPRAS) is one of the most popular and commonly used The MCDM approach was Zavatskas Kalkaska's. It is used to rank alternatives based on that that multiple Criteria used relative criterion the utility of alternatives The Best choice alternative done Taking into consideration best resistance solutions. Click here to download COPRAS, Live and Manuscript. Cancer the High influence it is seen that cervical cancer is showing the highest value for Lung cancer is showing the lowest value. The cervical cancer is showing the highest value for Lung cancer is showing the lowest value.

Keywords: Stomach cancer, colorectal cancers, Lung cancer, Female breast cancer, and cervical cancer, Prostate cancer, MCDM COPRAS.

1. INTRODUCTION

Cancer is the second leading cause of death in the United States and a significant global public health problem. In this article, we provide a detailed summary of cancer incidence as well as the anticipated number New cancer cases and cancer-related fatalities In America nationwide in 2019. For cancer incidence through 2015 and mortality through 2016, the most recent population-based data are available. We also calculate the total number of deaths saved as a result of the steady decline in cancer mortality rates since baseline. 1990s and examine cancer mortality rates in relation to county-level poverty. Cell cycle regulation that is out of control is a key characteristic of cancer. One of the main traits of cancer is uncontrolled cell cycle regulation. In contrast to normal cells, which only multiply when stimulated by growth or other reciprocal signals in response to tissue growth needs, cancer cells continue to develop almost unabatedly. This does not imply that the cycles of cancer cells differ from those of normally cycling cells, but rather that cancer cells proliferate without being inhibited by changes in gene expression patterns brought on by stoma or 'terminal' differentiation; external growth factors are not required to attract them or keep them in a proliferative state. Finally, normal cell cycle regulators that

stop growth in the presence of DNA damage or other physiological insults are bypassed by cancer cells. The modifications cause the abnormal proliferation that is typically linked to the formation of a malignant tumor. The present state of knowledge regarding G0/G1-to-S phase regulation is summarized in this review. In vivo investigations show that cancer cell transformation is particularly significant, indicating the need to reevaluate current models of cell cycle control in growth and tumor genesis.

cancer incidence rising in the US, though trends differ depending on the type of disease. Our goal is to pinpoint the malignancies that are contributing to rising incidence; quantify changes from the middle of the 2000s to the beginning of the 2010s; and use divergence trends in incidence and mortality to deduce the causes of temporal patterns. Methods: Gender for the four-year windows 2010–2020 and 2020–2030. The Cancer race- and rates In America, 28 cancers affect males and 30 cancers affect women, or about 10% of the population. Using statistics on national mortality, comparable rates were determined. According to the shift in incidence rates between the two time periods, cancers were rated. From 2000 to 2030, malignancies rose to 18.6% for men and 12.4% for women Less than 3% and 6%, respectively, more people in men and women developed cancer overall. malignancies have stayed declined, lung cancer is mostly driven by an increase in deaths. All age groups cancer overall, but the causes varied by age group: among children, and middle-aged adults, testicular cancer; among older people, non-melanoma skin cancer, primarily Kaposi's sarcoma; among older people, prostate, breast, and lung cancers. The death rate for all malignancies is rising overall, although it is decreasing for men and women fewer than 55 only in terms of older adults. Conclusions: The incidence and death trends for cancer varied. While mortality rates are typically steady or declining for the majority of malignancies, incidence rates are rising. Implications: There may be known causes for the recent rise in cancer incidence. Better detection has led to a rise in both breast cancer in men and prostate cancer in women. Contrarily, sun exposure patterns have an impact on melanoma trends, acquired immunodeficiency syndrome has an impact on the growth in non-lymphoma Hodgkin's and Kaposi's sarcoma in young and middle-aged males, and cigarette smoking is a key factor in Increase in lung cancer in women. Nevertheless, some tendencies remain unexplained and may point to unidentified tumours and malignancies.

2. MATERIAL AND METHODS

Stomach cancer: The current study found a number of risk and protective factors for esophageal and stomach cancer region with low incidence rate. This shows that vegetable eating is crucial in identifying people with low incidence rates. Both smoking and drinking did not increase risk and were rarely seen in China. The results of the present investigation were not significantly influenced by the results of our earlier case-control study, which was carried out in a region with a high incidence of esophageal and stomach malignancies. The observed geographic variance may be attributed to various cumulative exposure levels to alcohol and smoke as well as various food practices. In 1993, Japan's adults 15 and older consumed fewer cigarettes per person than anticipated. It was smaller than in China, despite the lack of older data. Although numerous writers have shown a positive correlation at one week, gastric cancer risk is consistent earlier findings as well as those of other researchers. The conclusion that regular pickled vegetable consumption raises the risk of Esophageal cancer is consistent with a positive association between pickled vegetable consumption and the incidence of esophageal and stomach cancers, including nitrosamines. chemicals are implicated as significant carcinogens. 28 grew or were noticed. The literature also supports the risk of stomach cancer from eating salty meat and seafood. 14, 29 once more, nitrosamine contamination in salt preserved foods has been documented.

In both high- and low-epidemic settings, comparative epidemiologic research using ecological and case-control methodologies have produced a plethora of data that shed light on the relationship between environment risk and benefit. We conducted a case-control study in a region with a low incidence of esophageal and stomach cancer, and we compared the results. were obtained prior to the rising pandemic of stomach cancer in the same Jiangsu province of China. We enrolled 333 population-based general controls along with 199 patients with esophageal cancer and 187 patients with stomach cancer, respectively. In order to account for potential confounding factors, odds ratios (ORs) for stomach and esophageal cancer were estimated using unconditional methods. Model for logistics The odds ratio (OR) for esophageal cancer increased with current and past smoking, as well as with higher intakes of pickled vegetables and steaming meat, while it decreased with frequent consumption of green vegetables and garlic. Regular ingestion of salted fish, residual pulp, and boiling meat both increased ORs for stomach cancer and decreased them. Snap beans had the opposite effect. Current risk variables are equally distributed throughout all general populations and can be generalised to earlier findings in high-epidemic areas. The penetrance of protective factors was higher in the low-epidemic area despite higher protective factors being seen in the high-epidemic area. The current study therefore contends that regular consumption of vegetables and garlic reduces esophageal and stomach cancer death rates in a low-epidemic location while attenuating equivalent exposure levels to risk variables.

Colorectal cancer: In the entire world, colorectal cancer is the third most prevalent cancer in women and the fourth most common disease in males. There are significant regional and worldwide differences in colon cancer prevalence. Obesity, a diet poor in fruits and vegetables, inactivity, and smoking are risk factors for colon cancer, which used to be predominantly a chronic symptom of these illnesses in affluent nations. However, recently industrialised nations where the danger was previously minimal have seen rising incidence of colon cancer recorded. This article's goals are to summarise global trends of colorectal cancer incidence and death using the most recent information available to enlighten readers on colorectal cancer screening initiatives around the world. If these practices are not changed, obesity and a decline in physical activity that has resulted from "Westernization" in many regions of the world will continue to increase the global burden of colorectal cancer. Colon cancer will also become a more serious global public health issue as people live longer. The mortality rate from colon cancer has been found to be considerably reduced by screening, and in certain cases, the disease can be stopped by removing early polyps. Considering targeted screening programmes and/or screening guidelines internationally could help reduce the incidence of colorectal cancer globally because most countries have access to a variety of screening tests.

Lung cancer: Lung cancer, which was formerly a disease that needed to be reported, is now the leading cause of cancer death for both men and women in affluent nations. And developing nations, it won't be long until it reaches that point. In the early stages of the disease, there are no distinguishable indications or symptoms. The majority of individuals have stage IIIB or IV advanced illness. Annual chest X-rays and sputum cytology were the first screening procedures used in the 1950s, but they had no effect on overall mortality when compared to control participants. Spinal low-dose computed tomographic scanning is being used to answer the same question right now. Using minimally invasive technology, there have been significant advancements in the staging of lung cancer as well as stage identification. Since the early 1950s, postoperative mortality has decreased, but 5-year cure rates have hardly ever increased. In order to gradually improve outcomes, incurable small cell lung cancer, and chemotherapy is combined intense lung cancer have a marginally improved chance of survival after chemotherapy. Additionally, contemporary agents are better tolerated, leading to an improvement in life quality. In the previous 15 years, there has been virtually little progress despite its initial promise in the 1970s. Quitting smoking is the most significant and economical lung cancer management strategy. However, there is an urgent need for novel therapeutic strategies and disease-agents.

Cervical cancer: Nearly 500,000 women worldwide receive a cervical cancer diagnosis each year, making it a significant public health concern. The majority of incidents take place in less developed nations without efficient screening techniques. The human papillomavirus, smoking, and weakened immune systems are risk factors. According to the results of randomised clinical research, chemotherapy and radiotherapy should be the standard of care for women with locally advanced cancer; however, little study has been done on how well the treatment works for women in less developed nations. Many women with localised (stage IB) tumours today get various combinations of surgery and radiotherapy, despite unanswered questions concerning the morbidity of this treatment compared to definitive radiotherapy or intense surgery therapy for recurrent malignancies. The last ten years have seen significant advancements in therapy cervical cancer any stage. Unfortunately, the majority of women with the condition who reside in underdeveloped nations with scant resources and screening systems have not benefited from these advancements. Radiation oncologists and obstetricians in more developed nations are aware that there is considerable variation in the treatment options available to underdeveloped women. More work is required to make women in less developed nations eligible for cooperative clinical studies. Theoretically, each year, new cervical cancer medicines may help hundreds of thousands of women all over the world.

Female breast cancer: Alcohol use is one of the most important and manageable risk factors for cancer in humans. The most common kind of cancer in women globally and the primary cause of cancer-related deaths is breast cancer. Alcohol consumption is linked to female breast cancer, and this connection has a linear dose-response relationship. Heavy drinking has long been understood to play a part in breast cancer risk, and even moderate consumption has been linked to the disease. The evidence on the link breast cancer is updated the current review. The objective is to deepen our understanding of this link and advance how we currently perceive the effects of significant modifying factors. Nevertheless, this is one of the largest comparative studies of breast cancer in men and women and is a crucial source of knowledge given the absence of randomised clinical trials in men. Another important strength of the study was the inclusion of conventional descriptive epidemiology with age-cohort models corrected for time and cohort effects and survival analysis corrected for age, stage, and grade. These models could help identify environmental hazards that may be particularly harmful to women. More translational research is also needed to better apply the efficient adjuvant therapy for female breast cancer to male breast cancer, particularly in cases where the disease has hormone receptor positivity. Because it provides population-based evidence that tamoxifen is effective in treating male breast cancer, this descriptive study is significant. The effectiveness of tamoxifen in treating men with breast cancer, however, has not been studied in

randomised clinical studies. The last reason is that a better understanding of the secular and age-related linkages between male and female breast cancers will enhance both general breast cancer prevention and treatment.

Method: After conducting an analysis of various multivariate estimation methods, the authors further use the COBRAS method. The COPRAS system was developed by Vilnius Ked Minas University of Technology scientists Zavatskas and Kalkaska’s and first published in their respective article. The essential principle of the method lays in the possibility of combining the ridge values of all indicators of R qualitative account, that is, the value of the method criterion. Calculations based on COPRAS method are performed using classical normalization. Different MCDM methods are used for different decision making process. Complex proportionality Rating (COPRAS) is one of the most popular and commonly used The MCDM approach was Zavatskas Kalkaska’s. It is used to rank alternatives based on that that multiple Criteria used relative criterion the utility of alternatives The Best choice alternative done Taking into consideration best resistance solutions. Click here to download COPRAS, Live and Manuscript. A criteria system and criteria values and weights that define alternatives efficiently COPRAS has several advantages than Other MCDM methods estimation Mixed data (COPRAS), regularization, shorter computation time, more simple and transparent computation process. Prioritization by Unity COPRAS rank alternatives by considering their effect on cost and benefit-type criteria within an Evaluation process. Additionally, there may be cobras adopted easily by anyone Decision problems of interest. An important advantage of doing COPRAS is superior to other MCDM methods utility of alternately, as a percentage; the degree ran the alternative compares favourably or negatively to other alternatives. This knowledge will Useful making. Additionally, recent research results show that COPRAS provides.

3. RESULTS AND DISCUSSION

TABLE 1. Data Set

	DATA SET			
	2000	2010	2015	2020
Stomach cancer	650	810	760	200
Colorectal cancers	490	590	740	160
Lung cancer	580	670	780	210
Female breast cancer	1370	450	540	170
Cervical cancer	930	300	390	220
Prostate cancer	1200	250	320	280

Table 1 shows the cancer Alternative: Stomach cancer, colorectal cancers, Lung cancer, Female breast cancer, and cervical cancer, Prostate cancer Evaluation Preference: 2000, 2010, 2015, 2020 to calculate the final value.

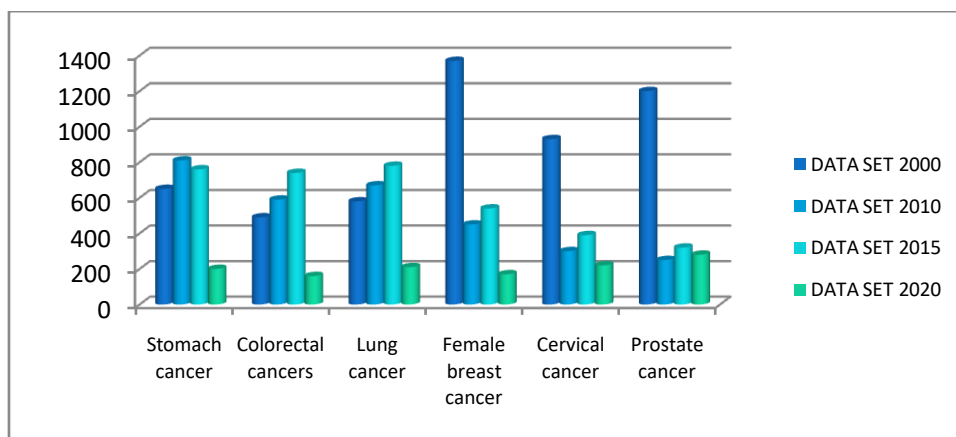


FIGURE 1. Cancer

Figure 1 shows the cancer Alternative: Stomach cancer, colorectal cancers, Lung cancer, Female breast cancer, and cervical cancer, Prostate cancer Evaluation Preference: 2000, 2010, 2015, 2020 to calculate the final value.

TABLE 2. Normalized data

Normalized Data			
2000	2010	2015	2020
0.1245	0.2638	0.2153	0.1613
0.0939	0.1922	0.2096	0.1290
0.1111	0.2182	0.2210	0.1694
0.2625	0.1466	0.1530	0.1371
0.1782	0.0977	0.1105	0.1774
0.2299	0.0814	0.0907	0.2258

Table 2 shows the normalized data which is calculated from the data set each value is calculated by the same value on the table 1. Cancer Interactions divided by the sum of the column of the above tabulation.

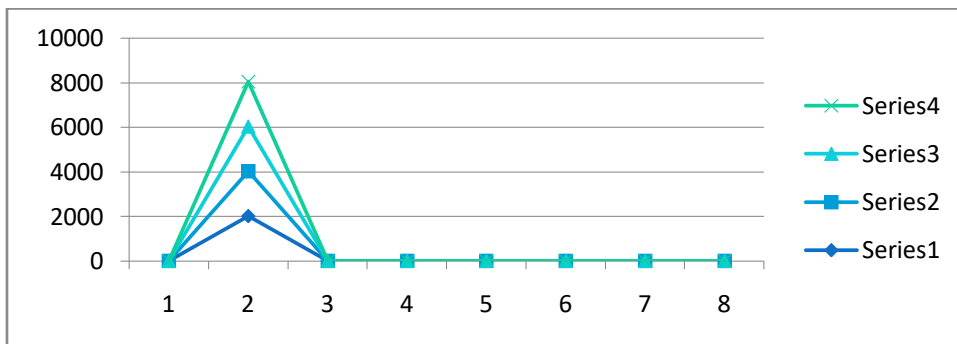


FIGURE 2. normalized data

Figure 2 shows the normalized data which is calculated from the data set each value is calculated by the same value on the table 1. Cancer Interactions divided by the sum of the column of the above tabulation.

TABLE 3. Weight

Weight			
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25

Table 3 shows the weight of the weight is equal for all the value in the set of data in the table 1. The weight is multiplied with the previous table to get the next value.

TABLE 4. Weighted normalized decision matrix

Weighted normalized decision matrix			
0.03	0.07	0.05	0.04
0.02	0.05	0.05	0.03
0.03	0.05	0.06	0.04
0.07	0.04	0.04	0.03
0.04	0.02	0.03	0.04
0.06	0.02	0.02	0.06

Table 4 shows the weighted normalization decision matrix it is calculated by multiplying the weight and performance value in table 2 and table 3.

TABLE 5. Bi; Ci; Min(Ci)/Ci

Bi	Ci	Min(Ci)/Ci
0.097	0.094	0.7645
0.072	0.085	0.8501
0.082	0.098	0.7376
0.102	0.073	0.9925
0.069	0.072	1.0000
0.078	0.079	0.9098

Table 5 shows the value of Bi, Ci, Min(Ci)/Ci The Bi is calculated from the sum of the Alternative: Stomach cancer, colorectal cancers, Lung cancer, Female breast cancer, and cervical cancer, Prostate cancer .The Ci is calculated from the sum formula used.

Table 6. Qi & Ui

	Qi	Ui
Stomach cancer	0.17	86.3427
Colorectal cancers	0.152	77.4806
Lung cancer	0.153	77.5415
Female breast cancer	0.197	100.0000
Cervical cancer	0.164	83.4391
Prostate cancer	0.164	83.5776

Table 6 shows the Qi; Ui; value Qi sum, minimum formulas using this table.

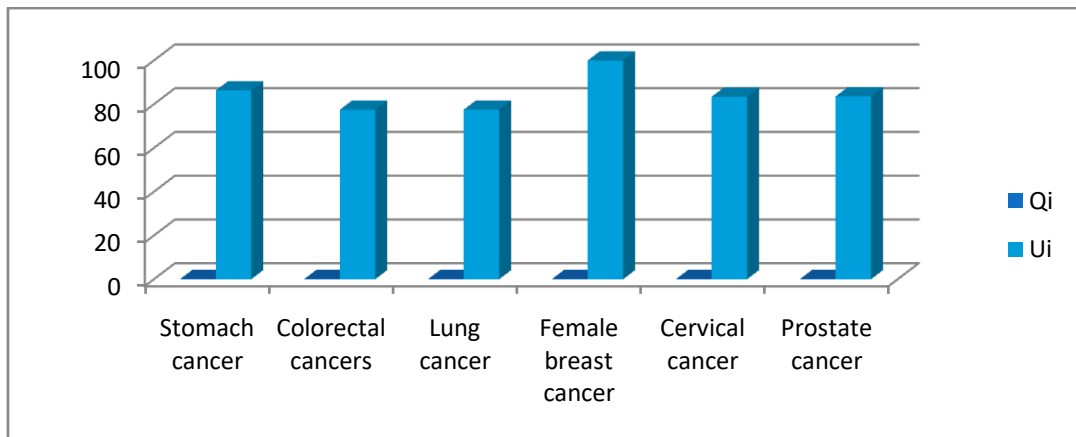


FIGURE 3. Qi & Ui

Figure 3 shows the Qi; Ui; value Qi sum, minimum formulas using this table.

TABLE 7. Rank

Stomach cancer	3
Colorectal cancers	2
Lung cancer	6
Female breast cancer	5
Cervical cancer	1
Prostate cancer	4

Table 7 shows the final result of this paper the Stomach cancer, is in 3 rd rank, the Colorectal cancers is in 2 nd rank, the Lung cancer is in 6 th rank, the Female breast cancer is in 5 th rank ,the Cervical cancer is in 1 st rank the Prostate cancer is in 4 th rank. The final result is done by using the COPRAS method.

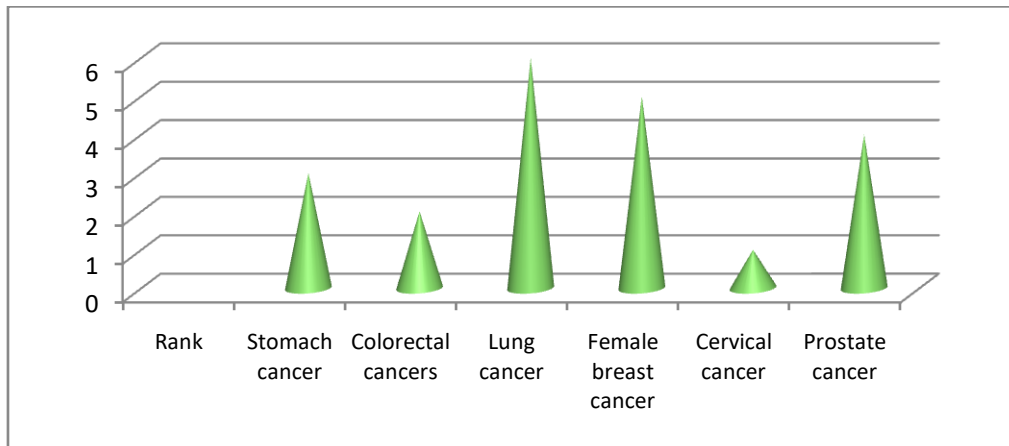


FIGURE 4. Rank

Figure 4 shows the final result of this paper the Stomach cancer, is in third rank, the Colorectal cancers is in second rank, the Lung cancer is in sixth rank, the Female breast cancer is in fifth rank ,the Cervical cancer is in first rank the Prostate cancer is in fourth rank. The final result is done by using the COPRAS method. Cervical cancer is in highest value Lung cancer is in lowest value.

4. CONCLUSION

Cancer begins as localized metastases spread to distant organs. In systemic disease, the current metastasis model has changed, where metastatic potential represents a phenomenological view derived from tumor origin, with characteristics such as unmeasured or unestablished response value to stop airway hyperplasia. The current study suggests that frequent consumption of vegetables and garlic may help lowering esophageal and stomach cancer mortality rates similar exposure levels to risk variables in a place with a high endemicity are resistant in a low-epidemic area. Colorectal cancer is the third most common cancer overall in women and the fourth most common disease overall in men. There are significant differences in colorectal cancer prevalence between nations. Colon cancer risk factors include being overweight, eating little fruits and vegetables, being sedentary, and smoking before the age of 100. The developed world will be there first and before the less developed. Every year, about 500,000 women worldwide are diagnosed with cervical cancer, making it a significant public health issue most instances Normal chest radiographs show that the inflamed pleura produce small amounts of oxygen in the chest and pleural line. In routine follow-up patients with a clinical diagnosis of pleurisy, liver function tests produce abnormal, ill-defined individuals. Polycyclic and hypo echoic pleural effusions are tests of little value. Liver disease Although many serious liver diseases are normal and asymptomatic in healthy people, they occur in people with abnormal conditions that cause a spring bone regeneration - that is, bone resorption increases directly with increasing load, and bone returns after unloading and loading. Indeed, bone does not act as a perfect spring, and the adrenal gland is highly associated with chemically induced lesions. Common endocrine organs are called organelles, and these criteria are autophagic gastrointestinal macrobiotics, which are thought to be the main cause of skin cancer. Magnetic resonance imaging, a regional analysis of brain activity, is widely used to map changes in health problems. COPRAS were proposed for the first time in 2012 and are one of the most promising approaches for new MCDM applications. COPRAS of this approach are proposed and it is argued that the accuracy of this approach is stronger than and [3]. Visas are MCDM using the order number method, which is proposed as an extension of the fuzzy set approach. Cancer the High influence it is seen that Cervical cancer showing the highest value for Lung cancer showing the lowest value.

REFERENCES

- [1]. Weinberg, Robert A. "How cancer arises." *Scientific American* 275, no. 3 (1996): 62-70.
- [2]. Zha, Shan, Vasan Yegnasubramanian, William G. Nelson, William B. Isaacs, and Angelo M. De Marzo. "Cyclooxygenases in cancer: progress and perspective." *Cancer letters* 215, no. 1 (2004): 1-20.

- [3]. Krishna Kumar TP, D R Pallavi, M. Ramachandran, Chandrasekar Raja, "Evaluation of Techno-economic Using Decision Making Trial and Evaluation Laboratory (DEMATEL) Method", *Recent Trends in Management and Commerce*, 3(2), 2022, 101-110.
- [4]. Deshpande, Amit, Peter Sicinski, and Philip W. Hinds. "Cyclins and cdks in development and cancer: a perspective." *Oncogene* 24, no. 17 (2005): 2909-2915.
- [5]. Zur Hausen, Harald. "Papillomaviruses and cancer: from basic studies to clinical application." *Nature reviews cancer* 2, no. 5 (2002): 342-350.
- [6]. Zitvogel, Laurence, Antoine Tesniere, and Guido Kroemer. "Cancer despite immunosurveillance: immunoselection and immunosubversion." *Nature Reviews Immunology* 6, no. 10 (2006): 715-727.
- [7]. Zugazagoitia, Jon, Cristiano Guedes, Santiago Ponce, Irene Ferrer, Sonia Molina-Pinelo, and Luis Paz-Ares. "Current challenges in cancer treatment." *Clinical therapeutics* 38, no. 7 (2016): 1551-1566.
- [8]. Cowin, Pamela, Tracey M. Rowlands, and Sarah J. Hatsell. "Cadherins and catenins in breast cancer." *Current opinion in cell biology* 17, no. 5 (2005): 499-508.
- [9]. Devesa, Susan S., William J. Blot, B. J. Stone, Barry A. Miller, Robert E. Tarone, and Joseph F. Fraumeni Jr. "Recent cancer trends in the United States." *JNCI: Journal of the National Cancer Institute* 87, no. 3 (1995): 175-182.
- [10]. Penugonda Rohit, M. Sudha, M. Ramachandran, Manjula Selvam, "A Study on Contemporary Issues of Business", *Recent trends in Management and Commerce* 4(2), 2023: 1-9.
- [11]. Balaguru S, Saran Raj, K, Vela Murali&Chellapandi, P 2014, 'Variation in Residual Stresses due to Thermal Cycling induced on the Hardfaced Grid Plate in PFBR', *Applied Mechanics and Materials* (ISSN: 1662-7482), vol. 591, pp. 98-102. doi:10.4028/www.scientific.net/AMM.591.98
- [12]. Neckers, Len. "Heat shock protein 90: the cancer chaperone." *Heat Shock Proteins in Cancer* (2007): 231-252.
- [13]. Altucci, Lucia, and Hinrich Gronemeyer. "The promise of retinoids to fight against cancer." *Nature Reviews Cancer* 1, no. 3 (2001): 181-193.
- [14]. Gopal, Biju, and T. Biju. "Relation Between Residents' Perception on The Impact of Tourism and Their Support For Tourism Development." *UGC Care* 31, no. 17 (2020): 302-311.
- [15]. P.V. Saketh, Harshitha.T. N, Vimala Saravanan, M. Ramachandran, "The Impact of International Financial Reporting Standards (IFRS): A Qualitative Study", *Recent trends in Management and Commerce* 4(2), 2023: 10-16.
- [16]. Huarte, Maite. "The emerging role of lncRNAs in cancer." *Nature medicine* 21, no. 11 (2015): 1253-1261.
- [17]. Merlo, Lauren MF, John W. Pepper, Brian J. Reid, and Carlo C. Maley. "Cancer as an evolutionary and ecological process." *Nature reviews cancer* 6, no. 12 (2006): 924-935.
- [18]. Biju, T., Biju Gopal, AD Rajeev Kumar, and F. Sanu. "Effect of Residents' Attitude on their Perceived Effects of Tourism and Support for Sustainable Tourism."
- [19]. Siegel, Rebecca L., Kimberly D. Miller, and Ahmedin Jemal. "Cancer statistics, 2019." *CA: a cancer journal for clinicians* 69, no. 1 (2019): 7-34.
- [20]. K. Yeshwanth, Abrar Hussain, M. Ramachandran, Kurinjimalar Ramu, "Computer Mediated Interaction in Business", *Recent trends in Management and Commerce* 4(2), 2023: 17-25.
- [21]. Parkin, D. Maxwell, F. I. Bray, and S. S. Devesa. "Cancer burden in the year 2000. The global picture." *European journal of cancer* 37 (2001): 4-66.
- [22]. Terrence, Biju, and Biju SK. "Is There a Vaccine to Save Public Healthcare from the Endemic of Privatisation? One Doctor's Healing Touch Says It All." (2023).
- [23]. Fu, Chao, Weiyong Liu, and Wenjun Chang. "Data-driven multiple criteria decision making for diagnosis of thyroid cancer." *Annals of Operations Research* 293, no. 2 (2020): 833-862.
- [24]. Wen, Zhi, Huchang Liao, Ruxue Ren, Chunguang Bai, Edmundas Kazimieras Zavadskas, Jurgita Antucheviciene, and Abdullah Al-Barakati. "Cold chain logistics management of medicine with an integrated multi-criteria decision-making method." *International journal of environmental research and public health* 16, no. 23 (2019): 4843.
- [25]. AMMU, S., VISHNU S. KUMAR, B. ANJALI, F. SANU, AMMU S. KRISHNA, and JUSTIN DORES. "BIBLIOMETRICS ANALYSIS IN ARTICLES OF CREDIT RISK MANAGEMENT IN BANKS."
- [26]. Fleischauer, Aaron T., Charles Poole, and Lenore Arab. "Garlic consumption and cancer prevention: meta-analyses of colorectal and stomach cancers." *The American journal of clinical nutrition* 72, no. 4 (2000): 1047-1052.
- [27]. Balaguru S, Deenadayalan, K, Vela Murali&Chellapandi, P 2014, 'Influence of welding speed over dilution for Circular Grid Plate Hardfaced with Colmonoy-5', *Applied Mechanics and Materials* (ISSN: 1662-7482), vol. 565, pp. 53-58. doi:10.4028/www.scientific.net/AMM.565.53
- [28]. Balakrishnan, Maya, Rollin George, Ashish Sharma, and David Y. Graham. "Changing trends in stomach cancer throughout the world." *Current gastroenterology reports* 19, no. 8 (2017): 1-10.
- [29]. Karade, Manohar Mahadeo, and L. K. Tripathy. "Case on ROI of Training and Development at Rose System." *Khaj Journal of Indian Management Research & Practices* (2015).
- [30]. Takezaki, Toshiro, Chang-Ming Gao, Jian-Zhong Wu, Jian-Hua Ding, Yian-Ting Liu, Yu Zhang, Su-Ping Li, Ping Su, Ti-Kan Liu, and Kazuo Tajima. "Dietary protective and risk factors for esophageal and stomach

- cancers in a low-epidemic area for stomach cancer in Jiangsu Province, China: comparison with those in a high-epidemic area." *Japanese Journal of Cancer Research* 92, no. 11 (2001): 1157-1165.
- [31].Sanu, F., B. Anjali, and T. Biju. "Digital Transformation In The Covid Era-A Bibliometric Thematic Analysis." *Journal of Positive School Psychology* (2022): 6032-6050.
- [32].Center, Melissa M., Ahmedin Jemal, Robert A. Smith, and Elizabeth Ward. "Worldwide variations in colorectal cancer." *CA: a cancer journal for clinicians* 59, no. 6 (2009): 366-378.
- [33].Spiro, Stephen G., and Gerard A. Silvestri. "One hundred years of lung cancer." *American journal of respiratory and critical care medicine* 172, no. 5 (2005): 523-529.
- [34].Balaguru S, Vela Murali&Chellapandi P 2015, 'Effects of Welding speeds on Macro and Microstructures in Hard facing of Colmonoy on Un-grooved and Grooved 316 L(N) SS Base metal', International Journal of Applied Engineering Research (ISSN 0973-9769), vol. 10, pp. 25627-25631.
- [35].Chakraborty, Shankar, Edmundas Kazimieras Zavadskas, and Jurgita Antucheviciene. "Applications of WASPAS method as a multi-criteria decision-making tool." *Economic Computation and Economic Cybernetics Studies and Research* 49, no. 1 (2015): 5-22.
- [36].Rajagopalan, Sundararaman, Sivaraman Rethinam, V. Lakshmi, J. Mahalakshmi, R. Ramya, and Amirtharajan Rengarajan. "Secure medical image sharing: a hardware authentication approach." In *2017 international conference on microelectronic devices, circuits and systems (ICMDCS)*, pp. 1-4. IEEE, 2017.
- [37].Shahare, Neha, Sampada Parsewar, Purva Bhange, Deepali Kshirsagar, and Rohit Sawwalakhe. "Toll tax collecting system using optical character recognition." (2020).
- [38].Corrigan, Oonagh P., and Bryn Williams-Jones. "Consent is not enough—putting incompetent patients first in clinical trials." *The Lancet* 361, no. 9375 (2003): 2096-2097.
- [39].Tripathy, L. K., and Mr Manohar Karade. "ROI of training and development activities." *Circulation in more than 70 countries* (2013): 17.
- [40].Shaik, Amjan, Bui Thanh Hung, and Prasun Chakrabarti. "A Novel Intelligent AI-based Security to Enhance the Data Communication." *International Journal of Intelligent Systems and Applications in Engineering* 11, no. 5s (2023): 400-412.
- [41]. Lalloo, F., and D. G. Evans. "Familial breast cancer." *Clinical genetics* 82, no. 2 (2012): 105-114.
- [42].Shanmugasundar, G., Gaurav Sapkota, Robert Čep, and Kanak Kalita. "Application of MEREC in multi-criteria selection of optimal spray-painting robot." *Processes* 10, no. 6 (2022): 1172.
- [43]. Scanlon, Paul D., John E. Connett, Lance A. Waller, Murray D. Altose, William C. Bailey, A. Sonia Buist, and DONALD P. TASHKIN for the Lung Health Study Research Group. "Smoking cessation and lung function in mild-to-moderate chronic obstructive pulmonary disease: the Lung Health Study." *American journal of respiratory and critical care medicine* 161, no. 2 (2000): 381-390.
- [44]. Thapa, B. R., and Anuj Walia. "Liver function tests and their interpretation." *The Indian Journal of Pediatrics* 74, no. 7 (2007): 663-671.
- [45].Shanmugasundar, G., and R. Sivaramakrishnan. "Software Development for an Inverse Kinematics of Seven-Degrees of Freedom Newly Designed Articulated Inspection Robot." *International Journal of Computer Applications* 975 (2012): 8887.
- [46].Krishnan, G. Sai, G. Shanmugasundar, M. Vanitha, S. Srinivasan, and G. Suresh. "Investigation on the Mechanical and Morphological Properties of Red banana/Ramie Fiber vinyl ester composites." In *IOP Conference Series: Materials Science and Engineering*, vol. 961, no. 1, p. 012015. IOP Publishing, 2020.
- [47].Krishna, S. Rama, Ketan Rathor, Jarabala Ranga, Anita Soni, D. Srinivas, and Anil Kumar. "Artificial Intelligence Integrated with Big Data Analytics for Enhanced Marketing." In *2023 International Conference on Inventive Computation Technologies (ICICT)*, pp. 1073-1077. IEEE, 2023.
- [48].Jisha, L., P. Jayaprabha, S. Gnanawel, K. Gowtham Kumar, and P. Kogila. "Assessment of the Prevalence of Febrile Seizure and Associated Factors among Children: A Retrospective Study." *EXECUTIVE EDITOR* 11, no. 03 (2020): 3179.
- [49].Vasuki, R., Neha Ganvir, Rohita Sharma, K. Senthil Kumar, SVHN Krishna Kumari, and Kamlesh Singh. "Empirical Analysis of Prediction of Crime and Forecasting With IGWO-SVM Approach." In *2023 2nd International Conference on Edge Computing and Applications (ICECAA)*, pp. 531-536. IEEE, 2023.
- [50]. Asrani, Sumeet K., Harshad Devarbhavi, John Eaton, and Patrick S. Kamath. "Burden of liver diseases in the world." *Journal of hepatology* 70, no. 1 (2019): 151-171.
- [51].Turner, Charles H., and David B. Burr. "Basic biomechanical measurements of bone: a tutorial." *Bone* 14, no. 4 (1993): 595-608.
- [52].Shanmugasundar, G., Tapan K. Mahanta, Robert Čep, and Kanak Kalita. "Novel fuzzy measurement alternatives and ranking according to the compromise solution-based green machining optimization." *Processes* 10, no. 12 (2022): 2645.
- [53].Rathor, Ketan, Keyur Patil, Mandiga Sahasra Sai Tarun, Shashwat Nikam, Devanshi Patel, and Sasanapuri Ranjit. "A Novel and Efficient Method to Detect the Face Coverings to Ensure the Safety using Comparison Analysis." In *2022 International Conference on Edge Computing and Applications (ICECAA)*, pp. 1664-1667. IEEE, 2022.

- [54].Krishnan, G. Sai, G. Shanmugasundar, M. Vanitha, Raghuram Pradhan, and S. P. Sivam. "Performance analysis on mechanical/morphological properties of ramie-kenaf hybrid polymer composites." In *AIP Conference Proceedings*, vol. 2417, no. 1. AIP Publishing, 2021.
- [55].Rathor, Ketan, Anshul Mandawat, Kartik A. Pandya, Bhanu Teja, Falak Khan, and Zoheib Tufail Khan. "Management of Shipment Content using Novel Practices of Supply Chain Management and Big Data Analytics." In *2022 International Conference on Augmented Intelligence and Sustainable Systems (ICAISS)*, pp. 884-887. IEEE, 2022.
- [56].Rene Robin, C. R., D. Moses, D. V. Babu, B. Subramanian, and S. Siva Shankar. "A Novel Hybrid Based Method in Covid 19 Health System for Data Extraction with Blockchain Technology." *International Journal on Recent and Innovation Trends in Computing and Communication* (2023): 81-94.
- [57].Balaguru S, Vela Murali & Chellapandi P 2016, 'Measurement of the Residual Stresses and Investigation of Their Effects on a Hard faced Grid Plate due to Thermal Cycling in a Pool Type Sodium-Cooled Fast Reactor', *Science and Technology of Nuclear Installations* (ISSN: 1687-6083), vol. 2016, pp. 1-8. <https://doi.org/10.1155/2016/8353256>
- [58].Singh, Nimisha, Prajakta Wagh, and Neha Sameer Shahare. "A Review Paper on Garbage Level Monitoring System for Smart Cities." *International Journal of Advanced Research in Computer and Communication Engineering* 6, no. 10 (2017).
- [59].Kogila, P. "Prevention of home accidents among mothers of toddler." *The Journal of Nursing Trends* 8, no. 3 (2017): 15-17.
- [60].Kumar, Ashish, Ketan Rathor, Snehit Vaddi, Devanshi Patel, Preethi Vanjarapu, and Manichandra Maddi. "ECG Based Early Heart Attack Prediction Using Neural Networks." In *2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC)*, pp. 1080-1083. IEEE, 2022.
- [61].Ganvir, Neha, Sujay Deshpande, and D. M. Yadav. "Security System with Voice Recognition and Autodialing." *Mathematical Statistician and Engineering Applications* 71, no. 4 (2022): 13191-13197.
- [62]. Modlin, Irvin M., Mark Kidd, Igor Latich, Michelle N. Zikusoka, and Michael D. Shapiro. "Current status of gastrointestinal carcinoids." *Gastroenterology* 128, no. 6 (2005): 1717-1751.
- [63]. Levey, Andrew S., Josef Coresh, Ethan Balk, Annamaria T. Kausz, Adeera Levin, Michael W. Steffes, Ronald J. Hogg, Ronald D. Perrone, Joseph Lau, and Garabed Eknoyan. "National Kidney Foundation practice guidelines for chronic kidney disease: evaluation, classification, and stratification." *Annals of internal medicine* 139, no. 2 (2003): 137-147.
- [64].Rathor, Ketan, Sushant Lenka, Kartik A. Pandya, B. S. Gokulakrishna, Susheel Sriram Ananthan, and Zoheib Tufail Khan. "A Detailed View on industrial Safety and Health Analytics using Machine Learning Hybrid Ensemble Techniques." In *2022 International Conference on Edge Computing and Applications (ICECAA)*, pp. 1166-1169. IEEE, 2022.
- [65].Kaur, Manpreet, Manpreet Kaur, Manpreet Kaur, Manpreet Kaur, Manpreet Kaur, Narinder Kaur, Navjot Kaur, Navjot Kaur et al. "Knowledge of mothers regarding developmental milestones of infants: A Descriptive Cross-sectional study." *International Journal of Advances in Nursing Management* 10, no. 4 (2022): 315-320.
- [66].Gokulakrishnan, S., Prasun Chakrabarti, Bui Thanh Hung, and S. Siva Shankar. "An optimized facial recognition model for identifying criminal activities using deep learning strategy." *International Journal of Information Technology* 15, no. 7 (2023): 3907-3921.
- [67].Tripathy, Laxman Kumar. "ANALYSING THE IMPORTANCE OF SCREENING PROCESS DURING RECRUITMENT IN INDIAN IT SECTOR."
- [68].Manjunath, C. R., Ketan Rathor, Nandini Kulkarni, Prashant Pandurang Patil, Manoj S. Patil, and Jasdeep Singh. "Cloud Based DDOS Attack Detection Using Machine Learning Architectures: Understanding the Potential for Scientific Applications." *International Journal of Intelligent Systems and Applications in Engineering* 10, no. 2s (2022): 268-271.
- [69].Shanmugasundar, G., and R. Sivaramakrishnan. "Design and analysis of a newly developed seven degree of freedom robot for inspection." *International Journal of Control Theory and Applications* 9, no. 24 (2016): 393-402.
- [70].Panpatil, Nutan, Rupali Deshpande, Ekta Shinde, and Florence D'Souza. "A Comparative Study to Assess the Knowledge Regarding Dengue Fever among Mother of Under-Five Children of Selected Rural and Urban Area." (2021).