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Expression changes of ARSD and its neighboring lncRNA genes in tissue samples of patients with breast cancer

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Introduction: The incidence age of breast cancer in Iran compared to developed countries have fallen by about a decade. However, an effective method for early diagnosis and/or treatment of the disease has not been found. Further genomic studies about different types of cancer, have shown that aberrant expression of lncRNAs can have an important role in the progression of cancer, metastasis as well as prevention, diagnosis and treatment of breast cancer. In this study, for the first time, the expression levels of ARSD and its adjacent lncRNA that is called ARSD-AS1 have been investigated in the clinical samples of tumor tissues of breast cancer and their non-tumor margins.

Methods and Materials: In this study, 36 tumor samples and their non-tumor margins were collected from patients with breast cancer. Total cellular RNA were isolated from each sample separately. Then, cDNA synthesized and Real-Time PCR technique were performed for quantitation of ARSD and ARSD-AS1 genes relative to GAPDH as internal control in clinical samples. Data was analyzed and Relative expression of ARSD and ARSD-AS1 genes in clinical samples of breast tumor tissues compared to non-tumor margins of the same tumors was showed.

Results: The results indicated that ARSD gene in tumor specimens compared to non-tumor tissue margins of the same tumors upregulates significantly. Also, ARSD-AS1 gene in tumor specimens compared to non-tumor tissue margins down-regulates significantly. Previously, the relationship between the expression of ARSD and its adjacent lncRNA had not been studied in breast cancer.

Conclusion: The results of this study showed that upregulation of ARSD and down-regulation of ARSD-AS1 genes in tumor tissues comparison to non-tumor tissues of the same tumors are in agreement with EST profiles and the recent results on Next Generation Sequencing, (NGS) studies, respectively. The results of our study may confirm the role of ARSD-AS1 in preventing preserve pluripotency stem cells as well. The results also shown that potential of noncoding RNA ARSD-AS1 in therapeu-diagnostic of breast cancer in the future that requires further investigations.
Pagets disease of the breast

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Background: Paget’s disease of the breast is an uncommon type of breast cancer that usually first shows as changes to the nipple. It occurs in less than 5% of all women with breast cancer. Men can also get Paget’s disease but this is very rare.

Symptoms: The most common symptom is a red, scaly rash involving the nipple, which may spread to the areola. The rash can feel itchy or you may have a burning sensation. The nipple may be inverted (pulled in) and there may also be discharge from the nipple.

Histopathology: In early lesions of paget disease of the breast, the epidermis usually shows only a few scattered paget cells. They are large, rounded cells that are devoid of intercellular bridges and contain a large nucleus and ample cytoplasm. The cytoplasm of these cells stains much lighter than that of the adjacent squamous cells. As the number of paget cells increases, they compress the squamous cells to such an extent that the latter may merely form a network, the meshes of which are filled with paget cells lying singly and in groups. The dermis in paget disease shows a moderately severe chronic inflammatory reaction. Although paget cells do not invade the dermis from the epidermis, they may be seen extending from the epidermis into the epithelium of hair follicles. Histologic examination of the mammary ducts and glands nearly always shows malignant changes in some of them. At first the carcinoma is confined within the walls of the ducts and glands, but the tumor cells ultimately invade the connective tissue. From then on, lymphatic spread and metastases occur. In mammary paget disease, the malignant changes have their onset in the lactiferous ducts and from there extend into the epidermis.
Personalize medicine in breast cancer

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Personalize medicine sometimes referred to as precision or individualized medicine is an emerging field of medical treatment based on molecular individual characteristics of each patient. Personalize medicine aims to identify molecular abnormalities that could act as therapeutic targets and genomic alterations causes to nonresponsive to conventional drug effect or treatment resistance.

Breast cancer represents tremendously complex in its molecular pathogenesis, natural history, and biology with highly variable clinical behaviors and disparate responses to therapy. Despite the important results of research to date, breast cancer remains an incurable disease; therefore ongoing studies are evaluating the clinical benefits of personalized medicine in breast cancer. Studies have shown differences in genes that code for drug-metabolizing enzymes, drug transporters or drug targets. The majority of patients have at least one DNA variation in the enzymes that metabolize half of the most commonly prescribed medicines. The genotyping of these enzymes has produced improved dosing of drugs for disease as well as cancer. This has helped patients avoid harmful side effects, adverse drug interactions, or ineffective treatment.

Breast cancer clinically has subdivided as hormone receptor positive, HER2 positive and triple-negative breast cancer, to guide therapeutic interventions. In breast cancer one of the earliest and most common examples of personalized medicine came in Herceptin® (trastuzumab) and Tykerb® (lapatinib) which are the most successful cancer therapeutics. About 30% of patients with breast cancer have HER2 over-expresses, which is not responsive to standard therapy. For this patient, trastuzumab with chemotherapy can reduce the recurrence of a tumor by 52 percent in comparison to chemotherapy alone.
Measurement of Fe in the serum of women with breast cancer before and after chemotherapy

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Abstract:

Introduction: Breast cancer is the most prevalent malignant tumor in the women. Iron metabolism is intently associated to carcinogenesis. Iron is the one of trace element that is essential for biochemical activities such as oxygen transport, energy metabolism and DNA synthesis. Iron includes as an essential catalysis for the production of free oxygen species. Increasing of the level of iron in serum through the Fenton and Haber reaction could lead to creation of free radicals and carcinogenic effects. Due to the importance of iron in the cancer patients, the level of iron before and after chemotherapy is investigated in this study.

Method: In this study, the level of iron in 60 patients of breast ductul carcinoma was analyzed before and after chemotherapy. 36 patients were in early stage and others were in advanced stage disease. The results were compared with each other.

Results: Our study was performed by SPSS ver 19 software using Paired t-test. Statistical analysis showed that the level of iron significantly was lower in breast cancer patients after chemotherapy than to breast cancer patients before chemotherapy (p <0/001). Also, the decreasing of iron level in each stage of the disease was meaningful (the early stage p <0/001). (advanced stage p <0/005).
Growth inhibition and induction of apoptosis in MCF-7 breast cancer cells by the new derivative from Pyranochromenes family.

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Background and aim: Cancer is a disease in which abnormal cells divide without control. This disease is one of the major causes of death in the world. Today there is a wide range of therapies such as chemotherapy, radiotherapy, and target therapy. However, chemotherapy has been associated with harmful side effects and resistance. According to these problems, new compounds are investigated to find out any agents which have fewer side effects and more anti-tumor activity. Among all agents, Pyrano-chromene family derivatives are a group of heterocyclic compounds, which can be important. In the present study, we have investigated the effects of a new derivative of the pyrano-chromene family on proliferation, viability, and induction of apoptosis in the MCF-7 cell line.

Materials and methods: In this study, the human MCF-7 cell line as an experimental model for breast cancer was treated with various concentrations of the compound. MTT test determined viability and cell growth inhibition. Following by the induction of apoptosis through fluorescence microscopy and electrophoresis in MCF-7 cells was investigated.

Results: Our study showed that: 1) this compound reduced viability in MCF-7 cells to concentration- and time-dependent manner, 2) this compound was also induced apoptosis.

Conclusion: According to the growth inhibitory and apoptotic effects of the new derivative can be proposed as compounds for pharmaceutical evaluation in the future.
Investigation of Factors Affecting on Sexual function in Women with Breast Cancer

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Background and Objectives: Breast cancer is the most prevalent cancer and the second cause of death among women, affecting individuals’ sexual function. The present study aimed to investigating of factors affecting on sexual function among women with breast cancer.

Materials and Methods: Across-sectional case-control study was conducted on 104 women with and without breast cancer referring to Hamadan Charity Health Assembly and Fatemiyeh Hospital in 2015. The data were collected through demographic characteristics questionnaire and FSFI (Female Sexual Function Index) questionnaire. Data analysis was performed using SPSS/V21, descriptive statistics, chi-square test, and t-test.

Results: The age average and standard deviation for the patients and non-patients were50.02±12.07 and 49.65±11.19, respectively. No statistically significant difference was observed between the groups. 100% (52) of the patients with breast cancer and 1.92% (1) of the healthy individuals had sexual dysfunction. The highest disorder in patients with breast cancer was decreased sexual desire (0.83±0.95) and the lowest was painful intercourse (1.43±0.703).

A significant difference was observed between the individuals with and without sexual dysfunction in terms of exercise history, birth control (contraception) method, surgery history, and chemotherapy and radiotherapy history (P<0.0001).

Conclusions: Sexual education of patients during treatment or holding sexual workshops in breast cancer clinics, oncology centers, and hospitals and performing aerobic and anaerobic exercises are recommended since the sexual function of patients with breast cancer is influenced by this disease and its relevant treatment.
Breast Cancer Awareness, Attitudes, and Behaviors of Midwives Participated in a Breast Cancer Prevention Seminar in Tehran

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Background: Breast Cancer is the most malignancy in women that high rate of mortality have been attributed to it. Midwives have important role to prevent the serious outcome and burden of this disease with awareness and Breast Clinical Examination for early detection. So the aim of this study was to investigate the awareness, attitude and behaviors of midwives, regarding Breast Cancer prevention procedure.

Methods: The analytic cross-sectional study has conducted on 210 students of midwifery aged (20-62) that are participated in clarify the duty of midwives in Breast Cancer early detection and prevention seminar in 2016. The data have collected with standard questionnaire (with Cronbach’s alpha coefficient was 0.77). The questionnaire has 4 parts with 55 questions. 6 questions were about socio-demographic information including: age, educational level, number of family members, marital status, family history of Breast Cancer and the others were about their knowledge, attitude, and performances. We used SPSS software version 13. The level of significance for the two-tailed test was employed P≤0.05.

Results: The results showed us more than half of participants (65.9%) have excellent knowledge about sign and symptoms knowledge. Only 7% of participants have weak stage of Brest Cancer risk factors knowledge. Few of respondents (2.2%) had harmful and dangerous habits in their lives. This study has determined that respondents (57-30.8%) do Breast self-examination once in a month and 16(8.6%) of them perform it hardly ever. There was significant relationship between knowledge of Breast Cancer prevention and education (P= 0.02). There was also significant relationship between awareness of BC risk factors and education(P=0.007). The level of their attitude has significantly associated with family history (P= 0.03).

Conclusions: The appropriate level of awareness and practice of breast cancer screening have observed in this study to educate other women about breast cancer prevention procedure.
Association of Fasl gene haplotypes with breast cancer risk in East Azarbaijan of Iran

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Background: Fasl is a key ligand in cell surface which acts in Fas/Fasl system and therefore triggers apoptosis, which is a self-destructive mechanism to maintain homeostasis. Functional polymorphisms in this gene were proposed to be associated with breast cancer risk. Breast cancer is one of the most common cancers and leading cause of cancer-related death among women worldwide. In present study, we focused on two polymorphisms of Fasl gene to analyze the association between haplotypes of these SNPs and breast cancer risk. These polymorphisms were Fasl –844 T/C (rs763110) and FASL INV2nt -124 A/G (rs5030772).

Material and method: The association between these two polymorphisms and breast cancer risk, was examined by a case-control study on 70 patients with breast cancer and 70 healthy controls from East Azarbaijan population. At first, genomic DNA isolated from peripheral blood of case and control individuals using salting out method. Then, Genotyping was performed by RFLP-PCR and ARMS-PCR (restriction fragment length polymorphism and amplification refractory mutation system respectively) methods. The data were analyzed by SHEsis platform, using pearson test, with a significance level of 0.05.

Results: Frequency of (CA) haplotype was higher in patients than control individuals (65.35 and 51.57 percent respectively) (OR=1.501, 95%CI=0.931-2.421, P=0.094768). frequency of (CG) haplotype was higher in healthy group than in patients (11.43 and 1.65 percent respectively) (OR=0.134, 95%CI=0.026-0.698, P=0.005593). (TA) haplotype frequency in case and control individuals was 40.65 and 30.43 percent respectively (OR=1.473, 95%CI=0.856-2.534, P=0.160798). (TG) haplotype frequency in case individuals was lower than in controls; 32.32 and 46.57 percent respectively; (OR=0.603, 95%CI=0.356-1.022, P=0.059052).

Conclusion: In our study, there was association between (CG) haplotype and decreased risk of breast cancer in East Azarbaijan of Iran.
Analysis of UCP2 gene expression in Breast cancer patients using Real time PCR

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Background: Uncoupling proteins (UCPs) are mitochondrial transporters present in the inner membrane of mitochondria and act as proton carriers. They are able to dissipate the proton gradient, reduce the membrane potential and produce Reactive Oxygen Species (ROS). It has been suggested that ROS and cellular oxidant stress have been associated with cancer. The ability of cancer cells to regulate ROS levels contributes greatly to autonomous growth, the evasion of apoptosis, and other hallmark characteristics of adaptation. Thus, UCP2 activity, a negative regulator of ROS, should be related to cancer development or progression. Increased UCP2 expression has been observed in Most of cancers, but not well understood in breast cancer. In this study we evaluate the association between UCP2 expression and Clinicopathological characteristics of breast cancer patients in Iran.

Materials and Methods: In the present study 35 breast cancer patients referred to Cancer Research Center of Imam Khomeini hospital between 2007-2009 years were analysed. Patients did not receive chemotherapy or radiotherapy before surgery. UCP2 gene expression and β-actin gene expression as a reference gene were assessed using quantitative Real-time PCR.

Results: Data were analysed by SPSS software. Over-expression of UCP2 gene was seen in 37% of patients. 20% of patients have shown no difference in expression levels. Also there was no association between UCP2 gene expression and clinical features of the patients.

Conclusion: Result showed UCP2 expression is correlated significantly with breast cancer in Iranian women.
Surveying kaleybar town's areas of healthiness volunteers knowledge about breast cancer in 1394

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Introduction: For reaching to static social development, helping society's people is needed. Areas of Healthiness volunteers are foregoers of this helping that have steped on participating people, providing and developing of society's healthiness. Therefore, by educating and promoting their knowledge and conveying messages by these individuals to women, We can recognize breast cancer timely and caused promoting healthiness.

Method: This research is descriptive-cross-sectional and sampling is accidentally that information was collected by using standard questionarie and was analyzed by spss software.

Conclusion: In this study 65 number of kaleybar town's woman healthiness volunteers of healthcare centers participated. Average age of participants was 37±9 and background of activeness age as healthiness volunteers was 8±6. From educational view %90 were lower diploma, %6.2 were diploma and %3.8 were varsity. Healthiness volunteers on breast cancer background%18.1 had weak knowledge, %52.9 were average, %29 had good knowledge and between knowledge level with educational level was gained meaningful correlation (p<0.002).

Discussion and conclusion: It should be attended to health politics that true education will be as recognizing strategy of breast cancer timely causes decreasing mortality and developing women's living quality.
Breast Cancer infiltrative Ductal Carcinoma in the lactating Young Patient::
A Case Report

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Breast cancer is quite rare in very young women. It is a disease primarily of older women, with 75% of cases occurring in women over 50 years of age. Only 6.5% of cases occur in women under 40 years of age, and a mere 0.6% of cases in women under 30 years of age. Thus, in the U.S., only about 1,200 cases of breast cancer occur in women under 30 years of age each year(1).

Mammography is capable of displaying changes in breast tissue several years before physical symptoms appear or before any abnormal masses can be palpated.

A 26-year-old lactating woman presented with pain in her right outer breast. She was also suffering from redness and swelling of the breast for a 3 day period. She first underwent a mammogram that appeared essentially normal. Next, an ultrasound imaging of her right breast revealed no abnormal masses. However, there was increased echogenicity and skin thickening in the outer half of her breast, possibly due to tissue inflammation. The clinical impression indicated mastitis of the right breast. She was treated with oral antibiotics for 1 week that resulted in a resolution of her symptoms. A follow-up ultrasound was performed 1 month after her symptoms first appeared. the patient’s condition improved with antibiotics each time an episode of inflammation occurred, an underlying breast malignancy needed to be ruled out because of the new episode of nipple retraction.

A core biopsy was carried out to examine the inflamed breast tissue in the patient. The core biopsy showed infiltrative ductal carcinoma scirrous type with focal chronic mastitis.

Up to 50% of the involved milk ducts in the patient’s right breast demonstrated features of cystic hypersecretory infiltrative ductal carcinoma.
To evaluate the efficacy of reflexology on symptom management in breast cancer

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abstract

Background: Breast cancer is the most common malignancy and the second-leading cause of death from cancer in women. The known most important determinant factors for breast cancer included: age, family history, genetics, personal history of breast cancer, radiation to chest/face before age 30, being overweight, pregnancy/breast feeding and menstrual history, using hormone replacement therapy (HRT), having dense breast, lack of exercise.

Although conventional medicine provides standard symptom care, more than 80% of women with breast cancer turn to complementary and alternative medicine (CAM) for symptom management. Among CAM therapies, reflexology is one specific choice reported by women with breast cancer.

Reflexology is defined as the systematic application of pressure to specific reflex points on the feet with the intention of promoting homeostasis. Working from the premise that reflex areas in the foot are linked to principal organs and glands via energy zones, it is presumed that the application of pressure to these areas releases congestion and promotes the flow of energy.

Reflexology is often used as supportive care for cancer patients, especially for the reduction of pain, nausea and emotional disturbances, which include anxiety and depression.

the aim of this study develop use of reflexology for reduce symptom on breast cancer.

Search method: We searched the following electronic databases with use of keywords such as reflexology and breast cancer and symptom in search engine such as sciencedirect, pubmed, google scholar to identify reports of relevant reflexology and reduce symptom of breast cancer.
Targeting of crosstalk between tumor and tumor microenvironment by β-D mannnuronic acid (M2000) in murine breast cancer model

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Metastasis is the main cause of death in breast cancer patients. Inflammatory processes following crosstalk between tumor cells and tumor microenvironment play an important role in progression and metastasis of cancer. Hence, targeting of these interactions may represent a novel promising strategy for breast cancer therapy. So, we investigated the effects of β-D Mannuronic acid (BDM), a new anti-inflammatory agent, on 4T1 breast cancer cell line both in vitro and in vivo. Proliferation assays revealed low-cytotoxic effect of BDM on 4T1 cells. However, BDM reduced activity of MMP2,9 and significantly decreased the adhesion of 4T1 cells to ECM in a dose-dependent manner. The in vivo results demonstrated that BDM strongly inhibits tumor growth and increases lifespan as compared with control mice. The decrease in tumor mass was associated with decreased metastasis, recruitment and frequency of inflammatory cells in tumor tissue. Our preclinical findings demonstrated that BDM therapy not only prevents formation of chronic inflammatory response but also inhibits crosstalk between tumor cells and their microenvironment, which is associated with reduction of tumor growth and metastasis arrest. Our data implies the use of BDM therapy in future clinical trials to open a new horizon for breast cancer therapy.
suppression of matrix metalloproteinases -2 and -9 in murine breast cancer cell line by β-d-mannuronic acid

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Introduction: Proteases, especially matrix metalloproteinase (MMP)-2 and -9 play key roles in advanced-stage breast cancer invasion and metastasis. 4T1 is an animal model cell line for human breast cancer studies, which is able to produce highly metastatic tumors in BALB/c mice. β-d-mannuronic acid (M2000) is an anti-inflammatory agent derived from brown algae. In this study, the effect of β-d-mannuronic acid on the cell proliferation and activity of MMP2, 9 in 4T1 cell line was investigated.

Materials and Methods: 4T1 cultured in the presence of various concentrations (0, 5, 25, 50, 100 and 200 μg/ml) of β-d-mannuronic acid. Analysis of tumor cells proliferation and MMPs activity in supernatants were carried out by LTT assay and gelatinasezymography respectively.

Results: Our data demonstrated that β-d-mannuronic acid did not effectively reduced the cell viability and number of 4T1 in 48h. However, markedly reduced the activity of MMP2 and 9 in a dose-dependent manner.

Conclusion: These findings suggest that the therapeutic potential of M2000 in treatment of tumor cell metastasis in breast cancer.
Investigating Effect of Cognitive-Behavioural Stress Management (CBSM) Program on Occupational Performance Women with Breast Cancer

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Background and Objectives: Primary treatment of Breast Cancer can have long-lasting or late effects that can influence a woman’s ability to fully participate in many occupations. Participation restrictions refer to challenges people face engaging in their self-care, productive, and leisure activities within their homes and communities. The aim of this study was to investigate the effect of Cognitive-Behavioural Stress Management (CBSM) program on occupational performance women with breast cancer.

Materials and Methods: This quasi-experimental study was conducted on 80 women with breast cancer selected in cancer treatment centers in Hamadan City. Participants were randomly allocated to intervention group (n=40) and control group (n=40). The intervention group received Cognitive-Behavioural Stress Management (CBSM) program sessions in four 2-hour sessions. The control group did not receive program. Data collection instruments included demographic questionnaire and Canadian Occupational Performance Measure (COPM). These questionnaires were filled out by patients before and at the end of treatment. To analyze the data, descriptive statistics and analysis of repeated measures were used.

Results: The results showed a significant change in occupational performance (included Self-care, Leisure, Productivity) score of COPM in the intervention group compared to the control group after the intervention (P=0.021). Also, results of paired t-test showed a significant change in occupational performance score (P=0.0001) of COPM in the intervention group after the intervention and two week follow up. Based on the analysis of repeated measures design, the effect of time on the experimental group in post-test and follow-up has improved occupational performance in all directions.

Discussion and Conclusion: Obtained results of data showed that Cognitive-Behavioural Stress Management (CBSM) program caused to improved occupational performance in intervention group. Therefore, this method can be used as one of complementary therapy besides medical therapy in oncology centers.
A comparative Investigation of the effect of Oligoclonal Nanobody and Herceptin on HER2 mediated signaling pathways in HER2-positive breast cancer cells.

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Breast cancer as the second most common cancer is considered a major problem among women. Presentation of novel therapeutic agents, combinations of existing therapies and targeted therapies have been created a promising future to improve and extend survival of patients. Cancer related antigens express in high amounts and their expression levels are associated with signal transduction cascades that they are related to cancer phenotype. So; membrane antigens are an important target to treat cancer that Her2 receptor used in the aim of treatment. Among the factors that targeted the Her receptor, tyrosine inhibitors and monoclonal antibodies have been attracted great attention. Monoclonal antibodies have still limitations. Nanobodies are the second generation of therapeutic agents that can be ideal because they show small molecules and monoclonal antibodies abilities together. Small size and nature of their single domain give them pharmacological and biophysical properties. A very interesting concept in molecular cancer treatment is based on Polyclonal or oligoclonal antibodies. oligoclonal antibodies target the several epitopes of special antigen and seem to be much more effective than the single monoclonal antibodies. Our aim of this study is evaluating of oligoclonal nanobodies specificity in related to HER2 receptor, their effects on cell signaling pathways in-vitro. Expression of phosphorylation of MAPK, Akt and the total expression of MAPK, Akt are investigated by performing western blots for comparison of downstream signaling pathways of nanobody/HER2 and Herceptin/HER2. Preparing for western blot experiments, cells treated with Herceptin and Nanobodies. In BT-474 cells, Herceptin decreased active AKT, p-MAPK42 and p-MAPK44 and oligoclonal decreased p-MAPK42, p-MAPK44, AKT in compared with the untreated cells as measured by antibodies specific to each pathways. In skbr3 cells, Herceptin decreased MAPK44, p-MAPK42 and Oligoclonal decreased AKT, MAPK44, p-MAPK42 and p-MAPK44 in compared with the untreated cells as measured by antibodies specific to each pathways.
The haplotype FAS-1377G-670A as a genetic biomarker to predict a lower risk of breast cancer in East Azerbaidjan province

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Background: Breast cancer is the most common cancer in women. Fas is the initiator of the apoptotic pathway. Polymorphisms in the FAS gene impair apoptotic signal transduction and may be significant in cancer development. Purposes: The object of the present study is the association analysis of FAS polymorphisms and haplotypes with the breast cancer risk in East Azerbaidjan province. Methods: The study was done on 157 breast cancer patients and 130 healthy controls. Genotype determination was performed using Tetra-ARMS-PCR for rs2234767 and RFLP-PCR for rs1800682. For statistical analysis, p<0.05 was considered as significance level. Data were analyzed using spss software. Results: In control group, distributions were 46.46%, 40.63%, 12.90% for rs1800682AA, AG, GG genotypes and in patients were 38.85%, 45.85%, 15.28%, respectively. For rs2234767, GG, GA, AA genotype distributions in controls were 63.59%, 32.64%, 3.76% and in patients were 57.96%, 39.49%, 2.54%, respectively. There was no significant difference in genotype and allele frequencies of both SNPs between patients and controls (p>0.05). The -1377G-670A haplotype has a higher frequency among controls rather than patients, significantly (65% versus 58%) (p=0.045). There was no significant difference for other haplotypes between patients and controls (p>0.05). Conclusion: The present study indicates that FAS promoter polymorphisms are not predisposing factor for breast cancer in East Azerbaidjan province. The -1377G-670A haplotype has a protective effect on breast cancer development in this province. Further studies are needed to determine the role of FAS polymorphisms in breast cancer development.
Scrophularia oxysepala medicinal plant extract exert anti-cancer activities on the mouse breast cancer cell lines by targeting apoptosis

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Introduction: Medical plants have been intensively studied as a source of antitumor compounds. The antitumor effects of the Scrophularia oxysepala medicinal plant extract is not studied on the mouse fibroblast L929 and 4T1 mouse breast cancer cell lines. In the present study, cytotoxic effects of the Scrophularia oxysepala extract were investigated on viability of L929 normal cells and 4T1 mouse breast cancer cell lines.

Material & methods: The cytotoxic effects of Scrophularia oxysepala on 4T1 and L929 cells were studied using MTT assay, Trypan blue staining, and DNA fragmentation assay were done at selected concentrations of the plant extract.

Results: According to the findings, the Scrophularia oxysepala medicinal plant extract (stems and leaves) can alter 4T1 cells morphology. So the Scrophularia oxysepala extract inhibits cell growth albeit in a time and dose dependent manner and results in degradation of chromosomal DNA. Cytotoxic effects of Scrophularia oxysepala extract on the 4T1 cells were significantly higher than on the L929 cells.

Conclusion: Our data well established the anti-proliferative effect of Scrophularia oxysepala extract, and clearly showed that the plant extract can induce apoptosis in vitro, but the mechanism of its activities remained unclea
Antitumoral and Antimetastatic effects of guluronate in murin breast cancer model

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Introduction: Today, malignancies and cancer, are the most common causes of death in human societies. According to published statistics, the United States of America accounted for more than 25 percent of cancer deaths, the most important cause of death. Common current treatment for cancer include chemotherapy, radiotherapy and surgery are cancerous tissue. especially devastating side effects on healthy cells, on the other hand, is always a serious problem in the way of this treatment have been raised. Breast cancer in the world after lung and stomach cancer, the second most common cancer, Despite significant advances in both diagnosis and treatment of cancer occurring, but metastasis is responsible for over 90% of deaths associated with cancer. Given the proven role of chronic inflammation in the development and progression of cancer, anti-inflammatory treatments as targets in cancer patients has always been to improve the situation. Nonsteroidal anti-inflammatory drugs (NSAIDs) use in cancer treatment due to adverse reactions in different organs (these effects mainly gastrointestinal system, blood vessels are associated), in practice with restrictions are facing. For this reason, the need to develop drugs with fewer side effects, cancer patients should be considered to improve more. Due to the extremely low toxicity of new anti-inflammatory drug Guluronate G2013, and due to all the negative use of NSAIDs available, assess the anti-inflammatory effects of the drug and the reduction or treatment of breast cancer, it is very important to reach. As mentioned above, inflammation and inflammatory pathways, involved in cancer and cause severe complications that lead to malignancies.

Results: Our survey showed that Guluronate, could have anti-inflammatory effects on the reduction of inflammatory cytokines including IL-6, IL-1β and TNF-α and reduced levels of expression and activity of MMP2 / 9 and decreased expression levels of inflammatory enzymes cyclooxygenase -2 (COX-2), inhibiting the progression of breast cancer.
Growth inhibitory effect of Scrophularia oxysepala extract on mouse mammary carcinoma in vivo system

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Introduction: Medical plants have been intensively studied as a source of antitumor compounds. The antitumor effects of the Scrophularia oxysepala medicinal plant extract is not studied on the mouse mammary carcinoma. In the present study, we determine the effect of Scrophularia oxysepala on triggering apoptosis in BALB/c mice.

Material & methods: After the emergence of tumor in BALB/c mouse, two groups of mice were received the extract at two doses of 50 and 100 mg kg⁻¹ respectively using intraperitoneal injection for 28 days. In order to assess the induction of apoptosis in cancer cells, the tunnel assay was carried out in mice.

Results: According to the findings, the Scrophularia oxysepala extract inhibits tumor growth. The weight of tumor mass in treated mice after resection was less than the control group. According to the TUNEL assay results, the herbal extract was able to induce apoptosis.

Conclusion: our data well established the anti-proliferative effect of Scrophularia oxysepala extract, and clearly showed that the plant extract can decrease the growth of breast tumors, thus it may represent an ideal therapeutic tool for breast cancer.
Evaluation of FasL -844 T/C polymorphism and breast cancer risk in East Azarbaijan of Iran

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Background: FASL is a member of Fas/Fasl system which acts as apoptotic pathway to trigger programmed cell death. De-regulation of this pathway prevents apoptosis. Polymorphisms in FASL gene is associated with breast cancer risk. Breast cancer is one of the common cancers in the world. In the present study we investigated the association between Fasl gene (-844 T/C) rs763110 polymorphism and breast cancer risk.

Materials & methods: The relationship between this SNP and breast cancer was examined in a case control study with 70 patients and 70 normal women from East Azarbaijan population. Genomic DNA was extracted from whole blood of case and control individuals using salting out method. genotypes were determined by RFLP-PCR method. The data were analyzed by Javastat Online Statistics Software, using the chi-square test, with a significance level of 0.05.

Results: In the present study, CC genotype frequency was higher in patients than the healthy individuals (24.28 and 18.57 percent respectively) but significant difference was not observed between two groups (OR=0.711, 95%CI=0.341-1.480, P=0.325). TT genotype distribution in case and control individuals was 24.28 and 27.14 percent respectively which statistical significant difference was not observed (OR=1.162, 95%CI=0.587-2.301, P=0.644). TC genotype frequency in case and control groups was 51.44 and 54.29 percent respectively and there was no significant difference (OR=1.121, 95%CI=0.619-2.031, P=0.686). T allele frequency in case and control individuals was 50 and 54.29 percent respectively (OR=1.188, 95%CI=0.656-2.151, P=0.544). C allele frequency in patients and healthy controls was 50 and 45.71 percent respectively (OR=0.842, 95%CI=0.465-1.524, P=0.544).

Conclusion: Our findings suggest that the FasL -844 T/C polymorphism is not associated with breast cancer risk.
Urtica dioica extract suppresses miR-21 and metastasis related genes in breast cancer

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Background: Breast cancer has a high prevalence among women in the whole world. The worst phenomenon in cancer is tumor invasion and metastasis. Researchers are looking for the most effective therapeutic approach which has the lowest side effects and the highest cytotoxicity and metastatic inhibitory on cancer cells.

Methods: To determine the cytotoxic effects of Urtica dioica extract, MTT assay was performed. The scratch test was exploited to assess the effects of Urtica dioica on migration of breast cancer cells. The expression levels of miR-21, MMP1, MMP9, MMP13, CXCR4, vimentin and E-cadherin in cancerous group and normal group were investigated using QRT-PCR.

Results: The results of genes expression in tumoral groups confirmed the overexpression of miR-21, MMP1, MMP9, MMP13, vimentin and CXCR4, and down expression of E-Cadherin compare with control groups (P < 0.05). Results of MTT assay presented that Urtica dioica significantly inhibited breast cancer cells proliferation. Moreover, findings of scratch assay exhibited the inhibitory effects of Urtica dioica on migration of breast cancer cell lines.

Conclusion: This study could identify the differentiated miR-21 and related gene expression in breast cancer.

Urtica dioica extract could inhibit cancer cell migration by regulation of miR-21, MMP1, MMP9, MMP13, vimentin, CXCR4 and E-Cadherin. Moreover, our findings also demonstrated that the extract substantially decreased the overexpressed genes and increased E-Cadherin in tumoral group.
The mechanism of green tea against breast cancer

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Nowadays treatment based on natural plant sources is an attractive insight into the anticancer therapy. Natural plant products are available sources with both curative and protective role for different cancers, particularly breast cancer. Breast cancer is the most common cancer among women and its mortality is still high. Recent studies indicated that green tea inhibits proliferation of breast cancer cells and block carcinogenesis.

This abstract attempts to highlight green tea bioactive components and their mechanisms in breast cancer prevention and treatment.

Green tea contains polyphenols including flavanols, flavandiols, flavonoids, and phenolic acids. Flavonols commonly known as catechins are the main green tea polyphenols which has four kinds: epicatechin (EC), epigallocatechin (EGC), epicatechin-3-gallate (ECG), and epigallocatechin-3-gallate (EGCG). EGCG is the most abundant flavonoid in green tea. Experimental studies show that green tea components lead to wide range of responses in breast cancer cells which are as following:

Anti-angiogenesis effect that inhibits new blood vessel growth required for tumor growth and metastasis. Also green tea catechins interact with target proteins including phosphoinositide 3 kinase (PI3K), Ras-GTPase activating protein (GAP), Bcl-xL and Bcl-2, insulin like growth factor 1 receptor (IGF-1R) and so on which are important for apoptosis induction and growth inhibition of cancer cells. Additionally, inhibition of cell signaling pathways such as Her-2/neu and Wnt signaling and inhibition of enzyme activities including cyclin-dependent kinase (CDK) 2 and CDK4 that leads to cell cycle arrest are other mechanisms of catechins. Green tea also affect on epigenetic alterations such as microRNAs, DNA methylation and histone acetylation.

Therefore, green tea catechins could inhibit proliferation of breast cancer cells and block carcinogenesis through different molecular mechanisms which finally lead to growth inhibition and apoptosis promotion. So applying this priceless plant could have been much more noticed as a new drug for breast cancer prevention and treatment.
Histone Demethylase in Breast Cancer: new approach for drug discovery

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Epigenetic alteration as well as genetic disorders are implicated in breast cancer. Histone methylation is a reversible epigenetic process involved in gene regulation that can both activate and repress the genes. Histone methylation is regulated by methyltransferase and demethylase enzymes which is contributed in different cancers. Generally, methylation of histone H3 lysine 4 (H3K4), H3K36, or H3K79 is associated with active transcription, whereas methylation of H3K9, H3K27, or H4K20 leads to gene silencing. Several histone demethylases alterations such as overexpression, downregulation, amplification or mutations involved in breast cancer tumorogenesis, which provide the possibility of using these enzymes as diagnostic and therapeutic tools.

There are two classes of histone demethylases: The amino oxidase type lysine specific demethylases LSD1 (KDM1) and LSD2 (KDM2), and the JumonJiC-domain containing demethylas. Several histone demethylases is deregulated in breast cancer. KDM1A (LSD1; AOF2), acting on H3K4 by gene repression, is overexpressed in breast cancer. KDM3 (s-JHD1C) is downregulated in breast cancer. KDM4A (JMJD2A, JHDM3A) that act on H3K9 and H3K36 is required for proliferation of breast cancer cells. KDM4B (JMJD2B), acting on H3K9 and H3K36, is required for proliferation and formation of metastasis in breast cancer cells. Also, KDM4C (JMJD2C, JHDM3C, GASC1), acting on H3K9 and H3K36, is overexpressed or amplified in metastatic breast cancer. KDM5B (JARID1B, PLU-1), acting on H3K4 by repression, is overexpressed in malignant breast cancer. KDM5A (RBP2; JARID1A) that act on H3K4 is overexpressed in breast cancer which is critical for breast cancer metastasis an progression

Aberrant expression of histone demethylase enzymes has been implicated in the breast tumor initiation and progression. The involvement of a large number of histone demethylases in breast cancer, raise the possibility of using these enzymes as diagnostic tools and applying them as a novel therapeutic targets and treatment modalities, as well.
Spiritual group therapy in Breast Cancer

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Background: Breast cancer is the most common cancer among females in Iran and most of the developed countries that, as a sudden event, has profound effects on all aspects of patients' lives. Spiritual group therapy is one of the important and effective factors that can enhance social support and coping in health matters.

Methods: Review of literature about breast cancer and spiritual health was performed through extensive library research and ISI, Science Direct, SID, MagIran and Google Scholar databases.

Results: Most studies show that religious involvement and spirituality are associated with better health outcomes, including greater longevity, coping skills, health-related quality of life and less anxiety, depression, and suicide.

Conclusions: Religion and spirituality affect people's mood, motivation and behavior. Spiritual interventions reduce the impact of diseases and increase the life quality of both patients and their families. Hence, spiritual group therapy can be used as a cost-effective complementary therapy for those undergoing breast cancer treatment.
Anacyclus pyrethrum extract inhibit cell growth and induce apoptosis of human breast cancer cells in vitro system

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Introduction: Breast cancer is the most common cause of cancer-related death among women in the whole world. There are a number of medicinal plants triggering apoptosis response in cancer cells, thus have a therapeutic potential. On the other hand, due to traditional uses and availability of Anacyclus pyrethrum extract, we decided to evaluate the efficacy of this medicinal herb on MCF-7 breast cancer cell line.

Materials and methods: In the present study the cytotoxic effects of Anacyclus pyrethrum extract were assessed by 3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide (MTT) assay and trypan blue viability dye. Then, flow cytometry assay were exploited to measure cell death and apoptosis stage.

Results: MTT and trypan blue assay showed that Anacyclus pyrethrum extract significantly inhibited the cell growth. According to the flow cytometry assay result, the herbal extract was able to induce apoptosis in MCF-7 breast cancer cell lines.

Conclusion: These results indicate that Anacyclus pyrethrum extract can successfully induce apoptosis in MCF-7 breast cancer cells. Therefore, it could be used as a novel therapeutic candidate for breast cancer treatment.
Stem cell therapy in breast cancer

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Breast cancer is one of the most common malignancies in women nowadays. Despite advances in early detection and adjuvant therapy, some of patients are diagnosed as advanced or metastatic disease. Chemotherapy in metastatic breast cancer has a palliative effects and short benefit in survival. This therapeutic limitation is associated with exiting of cancer stem cells (CSCs). Recent studies have highlighted the chemo- and radio-resistance of CSCs in solid tumors as a possible mechanism to explain why current treatment modalities fail to cure most patients. CSCs are tumorigenic cells that can generate tumors through the stem cell processes of self-renewal and differentiation into multiple cell types and cause relapse and metastasis by giving rise to new tumors. Some of studies support from this idea that CSCs play a major role in the initiation, maintenance, and clinical outcome of cancers. Therefore, development of specific therapies targeted at CSCs holds hope for improvement of survival and quality of life in patients with cancer, especially for patients with metastatic breast cancer. This review summarizes the characteristics and development of CSCs, as well as implications and challenges for breast cancer treatment.
Breast Cancer Subtypes Based on ER/PR/Her2 Expression: Comparison of Clinicopathologic Features and Survival

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Introduction: Breast cancer is the most common malignancy among women in 2014 and unfortunately this disease turned to a global concern for every woman. Early detection can decrease breast cancer death and be more effective for treatment procedure. Breast cancer categorized into at least five main groups based on the antibody markers such as ER, PR, and HER2 that differ in terms of risk factors, distribution, prognosis, therapeutic treatment and clinical outcome. Thus we evaluate the breast cancer survival and therapeutic outcomes based on immunohistochemical biomarkers to highlight the results for better prognosis for eliminating worries among women.

Methods: Study population consisted of 1772 new cases of breast cancer diagnosed from January 1999 to January 2014 at Shohada educational hospital, Tehran. In this study, we selected a simple classification based on the expressions of estrogen receptor, progesterone receptor and human epidermal growth factor receptor 2 (Her2). Hazard ratios according to grade and stage were calculated by Cox's proportional hazard model, with 95% Confidence Interval. Data were analysed with spss12. P value ≤ 0.05 was considered as statistically significant.

Results: The results showed us that the majority of cases were luminal A 37.16%. In Cox's regression analysis, the hazard ratio (HR) for each group compared to luminal A significantly was higher in Her2/neu (HR=3.5, P<0.001) and luminal B was about 2. It means that Her2/neu risk is 3.5 times than luminal A. The hazard ratio (HR) for Her2/neu after controlling for grade decreased (HR=2.8, P<0.001) but luminal B was about 2 in both models.

Conclusions: We found the disparities between survival times and molecular subtypes in addition to risk of mortality in each sub group that could be modified by adjusting grade and stage.
Evaluation of the percentage of rs1695 polymorphism of GSTP1 gene in Iranian population for proper usage of cyclophosphamide Drug in breast cancer

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Background: Results from Pharmacogenetic studies on cyclophosphamide and treatment of advanced breast cancer by this drug, have shown that genetic polymorphism in GSTP1 gene region has positive effect on metabolism of cyclophosphamide and is effective for drug consumer. Patients with heterozygous or homozygous mutants for the polymorphism are not at the risk of cyclophosphamide toxicity. This study showed a little high prevalence of rs1695 heterozygous form in different ethnic groups of Iran. Purpose: our purpose is evaluation of rs1695 polymorphism frequency among 300 Iranian people with different ethnicities in order to use appropriate doses of cyclophosphamide by using pharmacogenetic tests.

Material and methods: blood sample of 300 healthy people with different ethnicities include Persian, Azeri, Kurd, Baluch, Mazen and Gilak were collected after DNA extraction and amplification of the gene region by PCR, the presence or absence of polymorphism in the gene was analyzed using techniques: Tetra-ARMS

Discussion and conclusion: according to studies, it's found that the presence of the homozygous allele (A/A) and heterozygous genotype (A/G) in rs1695 polymorphic region of GSTP1 gene in exon 5, can neutralize several anti cancer drugs such as cyclophosphamide by its catalytic activity and thus toxic effects of this drug is not observable in patients carrying the A allele. In this study the high frequencies of the A/G genotype were reported %42/20, %42/85 in Gilaki and Baluch ethnicities respectively. The frequencies of A allele which involves in drug effectiveness were also reported as follows: Persian %78/84, Azeri %71/55, Mazen %73/33, Baluch %78/57, Gilak %81/25 and Kurd %77/14. According to this study there is a significant relationship (p<0.001) between and allelic frequencies in Iranian population and cyclophosphamide administration. Thus, according to this information, the presence of these genotypes and A allele should be analysed before administering cyclophosphamide using pharmacogenetic tests in Iranian breast cancer patients as well as other Asian countries in order to use standard dose of the drug and not to use alternative drugs in the presence of A allele.
Evaluation of the percentage of rs9561778 polymorphism of ABCC4 gene in Iranian population for proper usage of cyclophosphamide Drug in breast cancer

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Background: Results from Pharmacogenetic studies on cyclophosphamide and treatment of advanced breast cancer by this drug have shown that genetic polymorphism in ABCC gene region can alter metabolism of cyclophosphamide and has side effects and causes toxicity in drug consumers. rs9561778 polymorphism of ABCC4 gene is significantly in association with chemotherapy-induced effects. Patients with heterozygous or homozygous mutants for this polymorphism are at the risk of cyclophosphamide toxicity. This study showed a high prevalence of rs9561778 heterozygous form in different ethnic groups of Iran. Our purpose is evaluation of rs9561778 polymorphism frequency among 300 Iranian people with different ethnicities in order to use appropriate doses of cyclophosphamide by using pharmacogenetic tests.

Methods and materials: Blood sample of 300 healthy people with different ethnicities including Persian, Azeri, Kurd, Baluch, Mazen and Gilak were collected. After DNA extraction and amplification of the gene region by PCR, the polymorphism in the gene was analyzed using techniques: SSCP, RFLP, Tetra-ARMS and sequencing.

Results: According to studies, it was found that the presence of the mutant allele (T/T) and heterozygous genotype (G/T) in rs9561778 polymorphic region of ABCC4 gene in intron 26 results in reduced activity of ATP binding cassette (ABC) and causes toxic effects of cyclophosphamide in carriers of the T allele. In this study, the high frequencies of the G/T genotype were reported for Persian, Azeri ethnicities respectively. (%37, %28) The frequencies of T allele which involves in drug toxicity were also reported as follows: Persian %27, Azeri %22. According to this study, there is a significant relationship (P<0.001) between allelic frequencies in Iranian population and cyclophosphamide administration. Thus, according to this information, the presence of these genotypes and T allele should be analyzed before administering cyclophosphamide using pharmacogenetic tests in Iranian breast cancer patients special Persian, Azeri ethnicities as well as other Asian countries in order to reduce standard dose of the drug or use alternative drugs in the presence of T-allele.
The role of phosphoinositide 3-kinase (PI3K) pathway in breast cancer, A review article

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Despite major advances in our understanding of the etiology of breast cancer, it remains a leading cause of cancer death in women worldwide. The phosphoinositide-3 kinase (PI3K) pathway has been identified as an important target in breast cancer research for a number of years, but is new to most clinicians responsible for the daily challenges of breast cancer management. The phosphoinositide 3-kinase (PI3K) pathway regulates all aspects of breast cancer development, from initiation to metastatic dissemination. The databases PubMed, SCOPUS, and Embase were explored, and articles published on these topics between 2015 and 2016 were investigated. Mutations in the PI3K pathway are frequent in breast cancer, causing resistance to human epidermal growth factor receptor 2–targeted agents and, possibly, to hormonal agents as well. Mutation in PIK3CA breast cancer cells show a dose-dependent decrease in cell viability and anchorage-independent growth in soft agar, when treated with increasing concentrations of aspirin/salicylate. Co-treatment of aspirin sensitizes mutant PIK3CA breast cancer cells to PI3K inhibitors to enhance suppression of proliferation. Mechanistic studies indicate that the growth inhibitory effect of aspirin are due to activation of AMP-activated protein kinase (AMPK), inhibition of mammalian target of rapamycin complex 1 (mTORC1) signaling and induction of autophagy. The phosphatidylinositol 3-kinase/AKT/mammalian target of rapamycin (PI3K/AKT/mTOR) pathway is aberrantly activated in cancer. Early clinical evidence for the use of buparlisib has been encouraging, and several Phase II and III studies are underway to assess buparlisib in combination with other antineoplastic agents in breast cancer.
The importance of CHK2 (CDS1, RAD53) and BRCA1 genes in breast cancer

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The CHEK2 gene encodes a protein kinase that plays a crucial role in maintenance of genomic integrity and the DNA repair mechanism. CHEK2 is located on the long (q) arm of chromosome 22 at position 12.1. The CHEK2 gene provides instructions for making a protein called checkpoint kinase 2 (CHK2). This protein acts as a tumor suppressor, which means that it regulates cell division by keeping cells from growing and dividing too rapidly or in an uncontrolled way. The CHK2 protein is activated when DNA becomes damaged or when DNA strands break. In response to DNA damage, the CHK2 protein interacts with several other proteins, including tumor protein 53. Mutations to the CHEK2 gene have been linked to a wide range of cancers including breast cancer. Most notably, the deletion of a single DNA nucleotide at position 1100 in exon 10 (1100delC), produces a nonfunctional version of the CHK2 protein, truncated at the kinase domain. The CHEK2*1100del mutation is most commonly seen in individuals of Eastern and Northern European descent. The loss of normal CHK2 protein function leads to tumor development, which is associated with an approximately 25% lifetime breast cancer risk. Mutations in the BRCA1 and BRCA2 genes are responsible for only a part of hereditary breast cancer (HBC). The origins of "non-BRCA" HBC in families may be attributed in part to rare mutations in genes conferring moderate risk, such as CHEK2, which encodes for an upstream regulator of BRCA1. Previous studies have demonstrated an association between CHEK2 founder mutations and non-BRCA HBC.
تأثیر آموزش بر آگاهی و عملکرد زنان از تست خودآزمایی پستان شهرستان نیشابور

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سابقه و هدف: هدف از گزارش سرطان پستان تشخیص زودرس آن می باشد. از میان راهکارهای تشخیصی، خودآزمایی پستان راهی آسان، بدون عارضه، بدون هزینه و در دسترس برای همه خانمها محسوب می شود. این مطالعه با هدف تاثیر آموزش معاونت پستان بر آگاهی و عملکرد زنان صورت گرفته است.

مواد و روشها: در این مطالعه 101 زن مراجعه کننده به مراکز بهداشتی و درمانی نیشابور در طی 8 جلسه 60 دقیقه ای هفته ای دوبار، تحت اموزش قرار گرفتند. نمونه های پزشک توسط پرسشنامه آگاهی و به شکل عملی و با استفاده از چک لیست نحوه انجام تست BSE توسط آنان بررسی شدند. پس از اجرای عملی در زمینه BSE به آنان آموزش داده شد و پس از پایان آموزش اموزش صورت گرفت.

یافته ها: نتایج حاصل از آزمون های آماری نشان داد که بین نمره آگاهی قبل و بعد از آموزش (0.001 < p)، اختلاف معنی‌داری مشاهده گردید. همین‌طور، بین نمره عملکرد قبل و بعد از آموزش (0.001 < p) نیز نتایج معنی‌داری مشاهده گردید.

نتیجه گیری: با توجه به نتایج مطالعه حاضر، توصیه می‌شود برای های اموزش های مربوط به زمان خودآزمایی پستان در جهت ارتقاء سلامت زنان از زمان بلوغ‌تا‌باسگی توجه بیشتری شود.
بررسی ریسک فاکتورها، نقش ترموگرافی و HRT در تشخیص سرطان پستان

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مقدمه:
سرطان پستان بعد از سرطان ریه، دومین عامل مرگ و میر در زنان به شمار می‌رود. این مطالعه با هدف بررسی ریسک فاکتورها، نقش ترموگرافی و HRT در تشخیص سرطان پستان صورت گرفته است.

یافته‌ها:
یافته‌ها نشان داد ریسک فاکتورهای ابتلا به سرطان: سن، جنس، نولي‌پاره، منارک زود‌هنگام، یائسگی و هرچند ماموگرافی روش استاندارد طلایی در تشخیص سرطان پستان است، اما با توجه به افزایش بروز سرطان پستان در سنین بالایی و بافت متراکم پستان، سونوگرافی به عنوان یک روش تکمیلی توصیه می‌شود. در زنان یا گنده نیز با افزایش دانش‌های پستان، حساسیت و ویژگی ماموگرافی را کاهش می‌دهد. نتایج مطالعات نشان داد دار ترموگرافی در شناسایی کیست و میکروکولیفیکاسیون ها ناتوان بوده و در تشخیص هایپرپلازی، افزایش دانسیته موضعی بافت پستان، بدنه‌های ها و توده‌ها موثر است.

نتایج:
استفاده از روش‌های تکمیلی در شناسایی بیماری های بافت پستان توصیه می‌شود.
ارزیابی بیان ژن CYP1A1 در زنان سیگاری مبتلا به سرطان سینه در شهر تبریز
حمیده محسنزاده

مقدمه: سرطان سینه شایع‌ترین فرم سرطان در بین زنان زیر ۵۰ سال و از علل عمده مرگ ناشی از سرطان می‌باشد. مصرف دخانیات و مواجهه با دود سیگار و تنباکو یکی از عوامل خطرناکی در این زمینه می‌باشد. این موضوع از مطالعات ارتباط استعمال دخانیات و افزایش خطر پیشرفت سرطان سینه را نشان می‌دهد. این دود تنباکو شامل بسیاری از ترکیبات بالقوه مضری است که به طور مشترک در مرحله‌های مختلف پیشرفت سرطان سینه با خود می‌باشند. دود سیگار از طریق عضلات ریه گذشته وارد بدن می‌شود و به بافت‌های بدن مربوط می‌شود. در این مقاله، پیش‌بینی نشان می‌داده است که خطر پیشرفت سرطان سینه ارتباط زنگینی با استفاده از کلئوکربین، اکسیژن و دیگر منابع می‌تواند در سیگاری مبتلا به سرطان سینه باشد.

روش: از ۴۰ مورد نمونه بررسی شده، ۱۸ نمونه از زنان سیگاری و ۲۲ نمونه از زنان بدون سابقه مصرف سیگار جمع‌آوری گردید. RNA بافتی استخراج و میوه‌بندی فعال با روش RT-qPCR به منظور اکستراکشن RNA به کار رفت. داده‌ها با استفاده از نرم‌افزار SPSS ۲۰ تحلیل شد.

نتیجه‌ها: در این مطالعه، نشان داده شد که بیشتر افراد سیگاری در مقایسه با افراد بدون سابقه مصرف سیگار، به خطر پیشرفت سرطان سینه بیشتری می‌باشند. بنابراین، بهتر است افرادی که سیگار می‌سوزند، به سبک زندگی سالمی بپردازند و بهترین روش‌ها را برای جلوگیری از سرطان سینه به کار برند.

بحث: این تحقیق نشان می‌دهد که دود سیگار می‌تواند نقش مهمی در پیشرفت سرطان سینه بازی کند.
مروری بر درمانهای نوین در زمینه سرطان پستان

سنودا پارچه باقیه ۱، محمدحسن محمدی ۲، پدرام واحدی ۱، الهام کیهانی آذر ۵

دانشگاه آزاد اسلامی تبریز

۱. دانشگاه آزاد اسلامی تبریز

۲. دانشگاه آزاد اسلامی تبریز

۳. دانشگاه علوم پزشکی تبریز

۴. دانشگاه علوم پزشکی تبریز

مقدمه:
سرطان پستان یکی از شایع ترین انواع سرطان است. در طی مراحل اوولیه پیشرفت، استروژن نقش مهمی در افزایش تکثیر سلولی تومور دارد، این اثر با واسطه گیرنده‌های استروژن‌های داخلی یا استروژن‌های ایستراژون آفتگون قطع می‌شود. سرطان پستان به‌طور عمومی توسط گیرنده‌های EST و ER در سرطان‌های نوع TNBC و نوعی سرطان پستان تیرگی فاقد گیرنده‌های ER و/یا PR می‌باشد. بسیاری از درمان‌های وابسته به گیرنده‌ها بر این گیرنده‌ها تأثیر ندارند. پروتئین‌های مارک‌کننده تیمای (ID) که تنظیم گیرنده‌های تیمای حساس به پروتئین‌های افزایش زودرس سلول‌های بینایی می‌باشد، انسان‌ها چهار نوع از پروتئین‌های ID را به عنوان پروتئین‌های TNBC ارائه می‌دهند. پروتئین‌های TNBC از این پروتئین‌ها از نظر تیمای کم‌میزانی دارند. در زنان مبتلا به سلول‌های سرطانی تیمای منفی هستند. پروتئین ID ۴ در سلول‌های بینایی در حالت عادی و سرطان نسبت به دیگر پروتئین‌های ID منفی نیازمند این پروتئین‌ها را مارک کرده است.

روش کار: در بررسی متن‌های در سال‌های ٢٠٠٨ تا ٢٠١٣ کلیه فعالیت‌های پژوهشی با محوریت سرطان پستان و درمان‌های نوین آن در سایت‌های magiran، chochran، sid، Pubmed، google scholar نویسی و سایت‌های راستا و جوان داشت.

یافته‌ها: Stefania Dell’Orso و همکاران در مطالعه‌های خود بین پیژندیده TNBC در سرطان پستان می‌باشد. همچنین مطالعات نشان می‌دهند که TNBC فقط در بیشتر پروز ID پیش‌بینی‌های TNBC دارای تغییرات این پروتئین‌ها در هر دو حالت انرژی و سرطان نسبت به پیش‌بینی منفی است.

نتیجه‌گیری: در این مطالعه بیشتر روندهای TNBC درمانی نوین سرطان پستان با هدف کنترل سرطان پستان مورد نظر است.
مطالعه ارتباط پلیمورفیسم‌های Zn 1 CYP1A1 در زنان سیگاری مبتلا به سرطان سینه در شیر تبریز

حمیده مهدویزاده

پریوش استفاده‌ی معمول

مقدمه: سرطان سینه یکی از شایع‌ترین انواع سرطان‌ها و یکی از دلایل عمدّه‌ی مرگ در اثر سرطان در سرتاسر جهان می‌باشد. این بیماری به‌طور خاص، در زنان زیر 40 سال به خود اختصاص داده است. مطالعات نشان داده است که استفاده از سیگار و مصرف دخانیات می‌تواند به افزایش خطر پیشرفت سرطان سینه منجر شود. زن‌های سیگاری، بیشترین مصرف‌کنندگان سیگار در جامعه‌اند و خود هم‌زمان وابستگی به سیگار را نشان می‌دهند. دود سیگار شامل اجزای بالقوه مضر است که به طور متفاوت در مراحل مختلف پیشرفت سرطان سینه داخل باشند و دود سیگار از طریق غشاء آلوئولی ریه‌ها گذشته وارد خون شده و به جریان خون باخته سینه‌پزشک می‌رسد. Zn 1 CYP1A1 آنزیمی است که کودکته کردن ژن CYP1A1(Ile462Val) و CYP1A1(Ile462Ile) از مصرف دخانیات، وابستگی به سیگار و دود سیگار و افزایش خطر پیشرفت سرطان سینه را می‌پذیرد.

روش: از 40 خانم سیگاری با سرطان سینه تشخیص داده شده و 40 خانم سیگاری بدون سابقه سرطان سینه در خود و DNA نمونه بررسی پلیمورفیسم‌های CYP1A1(Ile462Val) و CYP1A1(Ile462Ile) روش PCR-RFLP استفاده شد. همچنین با استفاده از نرم‌افزار SPSS 16، داده‌ها تحلیل و ارزیابی شد.

بحث و نتیجه: در زنان سیگاری مبتلا به سرطان سینه و CYP1A1(Ile462Val) می‌توان به ریسک سیگاری بودن سابقه سرطان سینه بیشترین زن‌های سیگاری را شامل می‌کردند. این نتیجه نشان می‌دهد که این ژن‌ها می‌توانند در شناسایی زنان افسردگی و سیگاری مبتلا به سرطان سینه بهرهبرداری شوند.
تأثیر جراحی سرطان سینه بر بارداری

امیرحسین صورتی

جراحی، یکی از راه‌های درمان سرطان سینه می‌باشد. و می‌شود گفت که یکی از موفق ترین راه‌های درمان سرطان سینه می‌باشد. اگر سرطان در بارداری مشاهده شد از این جهت باید وضعیت بیمار را در دوران بارداری تحت نظر گرفته شود.

هر برهنه زمانی بارداری یکی از انتخاب جراحی سینه را می‌پذیرد. اگر سرطان در بارداری (در مرحله ۱ و ۲) باشد با احتمال بالا می‌توان با جراحی لامپکتومی یا ماستکتومی به حفاظت بارداری و جنین امینوار بود.

اگرچه ماستکتومی برای دوره‌های ۳ ماهه اول و دوره بارداری در اولویت قرار گرفته می‌شود.

عمل جراحی سرطان سینه بطور کلی در هر ۳ ماهه ای بی‌خطر تلقی می‌شود. در طی جراحی، باید گره‌های لنفاوی نیز مورد بررسی قرار گرفته شود. معمولاً این نقاط نیز در گردو می‌شوند و خارج می‌شوند.

در کل احتمال میرود جنینی که از مادری قیله دچار سرطان سینه بوده، می‌تواند شود طبیعی باشد اگر چه بعضی راه‌کارهای درمانی می‌تواند روز مغو و استخوان کودک تأثیر گذارد.
تأثیر غضروف کوسه ماهی در درمان مبتلایان به سرطان پستان

نگین صادقی

غضروف کوسه ماهی دارای اثر ضدئوموری و تحريك کندنگی پاسخ ایمنی است. سلول های دندریتیک (DC) نفوستیت های T و الگای Pاسخ های ایمنی اولیه را دارند. غضروف کوسه ماهی دارای نفوستیت های T به علت تولید گروه غضروف کوسه ماهی دارای اثر ضدئوموری و میکینگ که بر روی تولید و فعال سازی DC ها اثر میکنند.

پروتئین های غضروف کوسه ماهی از طریق افزایش بیان شاخه های بلوغ DC ها باعث تحريك و تکثیر بیشتر لنفوسیت های T آلودن میشود و در نتیجه پاسخ قوی ضدئوموری ایجاد میشود.

در یک تحقیق در بیماران مبتلا به سرطان پستان درکنار هورمون درمانی از کپسول های حاوی غضروف کوسه ماهی استفاده کردند. یافته های این تحقیق نشان داد مصرف غضروف کوسه سبب افزایش غضروف کوسه GAMA و افزایش نسبت CD8 به CD4 در بیماران شد.

غضروف کوسه ماهی میتواند با تقویت سیستم ایمنی سلولی در بیماران مبتلا به سرطان پستان به عنوان مکمل درمانی مورد استفاده قرار گیرد.
بررسی نقش BRCA1، HPV، (+)2-Her، سیتوکراتین 19 و زن 53 در سرطان پستان

الا صابر محمد. زهرا کمالی

مشهد. دانشگاه علوم پزشکی مشهد. دانشکده بیستاری و مامایی

سرطان پستان از جمله شایع ترین سرطان های زنان بشری می‌رود. مطالعات نشان داد جهش BRCA1 به عنوان یک مارکر بدخریم تومور مطرح می‌باشد که با مارکر اصلی پیش‌بینی و سلول‌های بدنی BRCA1 سرطان پستان CD44 مرتبث است. ارتباط بین مارکر می‌تواند نشاندهی آوران به ارتباط میان سرطان پستان با جهش های BRCA1 در مورد نقش ارتباطی عفونت ویروس پاپیلومایی انسانی در بدخریمی های پستان نتایج ضد و نفی‌پذیر است. (+)2-Her، سیتوکراتین 10 و در بیشترین موارد این مارکرها عناوین جهانی پیش‌بینی و تشخیص سرطان پستان مطرح گردیده و از جمله این مارکرها سیتوکراتین 19 است که می‌تواند به عنوان شاخص پیش‌بینی آگهی مهمی در خون بیماران مطرح گردد. پلی‌مورفیسم کدون 22 از زن 53 پیک عامل ژنتیکی مستعد کننده برای ابتلا به سرطان پستان می‌باشد.

علاء بر اگاهی و پیشگیری، غربالگری مارکر های فوق در جمعیت های پرخطر توصیه می‌شود.
درمان سرطان پستان و جراحی ماستکتومی و درصد بازگشت بیماری پس از عمل

امیرحسین صورتی

چکیده
موضوع: جراحی ماستکتومی و درصد بازگشت بیماری
جراحی، اصلی ترین روش درمان سرطان پستان است و اغلب زنان مبتلا به سرطان پستان با ظهور عمل جراحی قرار گیرند.

انواع جراحی سرطان پستان:
1. برداشتن تمام نسج پستان همراه با عدد لنفاوی زیر بغل و تمام بافت‌های مجاور (ماستکتومی رادیکال و بستری)
2. برداشتن تمام نسج پستان همراه با عدد لنفاوی زیر بغل (ماستکتومی تعیین شده)
3. لامپکتومی (برداشته توده)
4. برداشتن فستیو از نسج پستان و بازسازی آن (انکوپلاستیک)

جراحی پیشگیرانه برداشته تخمدان (اووفورکتومی)
زمینه برداشتن خارج شده بر سر کرانه‌های بزرگ کمتری برای ابتلا به سرطان سینه ناشان داده.
اند. چون خارج کردن تخمدان به معنی حذف منبع اصلی تولید هورمون استروژن بدن است.

در حالی که بحث درباره این انواع عمل ماستکتومی هست. برای اکثر زنان در مرحله 1 و 2 نتیجه لامپکتومی یا ماستکتومی نسبی همراه رادیوتراپی مشابه ماستکتومی کل پستان است. هیچ تفاوتی در میزان بقای زنان تحت درمان وجود ندارد.
مهدف رشد رده سرطانی MCF7 با استفاده از لاکتوپاسیلوس های جدا شده از دو محصول لبنی پنیر و دوغ استان کرمان طیبه جغرافیای نسب، موج خالقی، علیرضا فارسی نژاد

دانشگاه شهید باهنر کرمان

مقدمه
سرطان پستان در سراسر جهان مهم ترین و شایع ترین نوع بدخیمه در زنان است که بالاترین میزان درصد مرگ و میر را به خود اختصاص داده است. این پژوهش به منظور بررسی اثر ضد سرطانی لاکتوپاسیلوس های جدا شده از پنیر و دوغ استان کرمان انجام گرفت.

روش‌ها: برای این منظور، 25 سویه لاکتوپاسیلوس از دو محصول لبنی پنیر و دوغ استان کرمان به کمک روش‌های معمولی و مولکولی باکتری شناسی، جداسازی شد. سپس 4 سویه لاکتوپاسیلوس کشتی که به کمک حرارت براي مطالعه تاثیر بر سلول‌های سرطانی MCF7 به کمک روش رنگ‌سنجی (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) MTT در زمان‌های 24 و 48 ساعت مورد بررسی قرار گرفت.

یافته‌ها: نتایج بدست آمده نشان می‌دهد که سویه لاکتوپاسیلوس کشته شده می‌توانند رده سرطانی MCF7 را مهار کنند که با گذشت زمان این قدرت مهارکننده افزایش می‌یابد.

نتیجه‌گیری: براساس یافته‌های حاصل می‌توان به نتایج پژوهش بخش استفاده از لاکتوپاسیلوس های کشته شده به عنوان درمان مکمل یا جایگزین در درمان عمده‌ای نیز استفاده درمان پستان امیدوار بود.
بررسی عوامل خطر در بروز سرطان پستان
مریم جلالی
دانشگاه علوم پزشکی و خدمات بهداشتی درمانی گلستان

مقدمه: سرطان پستان، شایع ترین سرطان در زنان بوده و مطابق با آمارهای رسمی، سالانه بیش از 1.6 میلیون نفر در سراسر دنیا به این بیماری مبتلا می‌شوند. این بیماری منجر به 33 درصد سرطان‌های زنان و 19 درصد مرگ‌های وابسته به سرطان می‌شود. در کشورهای در حال توسعه، به دلایل مختلفی از جمله افزایش امید به زندگی، افزایش شرایط تغییر و تعطیلی با سبک زندگی غربی، شیوع سرطان پستان در حال افزایش است. لذا شناخت و میزان تاثیر عوامل مختلف خطر در پیشگیری از بروز بیماری از اهمیت ویژه‌ای پیدا کرده است.

هدف: شناخت و بررسی عوامل خطر مرتبط با بروز سرطان پستان.

مواد و روش کار: این مطالعه از نوع متاآنالیز بوده که از طریق جستجو در وب‌سایت‌های معتبر و بررسی تعداد زیادی از مقالات معتبر خارجی و داخلی به مرور پژوهش‌های مربوط به مهم‌ترین عوامل خطر مرتبط با بروز سرطان پستان پرداخته است.

یافته‌ها: با توجه به عوامل خطر مرتبط با بروز بیماری، به نظر می‌رسد که اصلاح عوامل خطر قابل تغییر می‌تواند نقش عمده‌ای در پیشگیری و تشخیص زودهنگام بیماری بازدید از مقالات معتبر خارجی و داخلی به مرور پژوهش‌های مربوط به مهم‌ترین عوامل خطر مرتبط با بروز سرطان پستان خواهد بود.

بحث و نتیجه‌گیری: هنوز هیچ راه قطعی برای پیشگیری از سرطان پستان وجود ندارد. ولی اقداماتی وجود دارد که تمامی انواع سرطان پستان را کاهش بخشد. اصلاح عوامل خطر قابل تغییر.

1. اصلاح عوامل خطر قابل تغییر
2. انجام آزمایشات زنده‌کش در موارد خاص
3. انجام ممنوع‌التصادف پیشگیری در موارد خاص
4. مصرف برخی از دارو‌های بلوک کننده گیرنده‌های استروئید
5. انجام ارومی‌مکانی‌پیشگیری
بررسی ارتباط زن‌زدنیی در مرحله سرطان پستان در بیماران مراجعه کننده به بیمارستان شهدا تهران

در سال‌های ۱۳۹۴-۱۳۹۵

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سابقه و هدف: سرطان پستان، شایع‌ترین سرطان زنان و اولین علت مرگ و میر ناشی از سرطان در زنان است. فاکتورهای زننیکی یکی از مهم‌ترین عوامل مؤثر در پیش‌گیری سرطان پستان می‌باشد. در میان عوامل زننیکی نقص انکوژن‌ها و تومور سایبورسورها نقش مهم‌تری دارند. لذا هدف از این مطالعه بررسی ارتباط میزان بروز زن‌زدنیی Ki-67 با مرحله سرطان پستان می‌باشد.

مواد و روش‌ها: این مطالعه توصیفی بر روی ۱۵۵ نفر از بیماران مبتلا به سرطان پستان مراجعه کننده به بیمارستان شهدا تهران در سال‌های ۱۳۹۴-۱۳۹۵ انجام شده است. اطلاعات دموگرافیک و stage بیماران از طریق پرسشنامه جمع‌آوری شد. سپس داده‌ها با استفاده از نرم‌افزار SPSS 16 و آزمون آماری Chi-square مورد تجزیه و تحلیل قرار گرفت. سطح معنایی داری P≤0.05 در نظر گرفته شد.

یافته ها: میانگین سنی بیماران ۵۳±۷ سال بود. ۲۶.۴% از بیماران در stage یک و stage ۲۰.۴% از بیماران در stage ۲ و stage ۲۳.۴% از بیماران در stage ۳ و stage ۲۳.۴% از بیماران در stage ۴ بودند. ۶۸.۹% از مبتلاان به سرطان پستان مثبت بودند. بین فراوانی Ki-67 و stage ۰.۵% و میزان بروز این علائم با هم نشان داده شد.

نتیجه‌گیری: هرچند Ki-67 در بیش از ۸۰% از مبتلاان به سرطان پستان مثبت بوده است اما از لحاظ آماری ارتباط معناداری بین میزان بروز این علائم در stage و میزان بروز این علائم در stage وجود نداشت.

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تأثیر مشاوره آموزشی خودآزمایی پستان مبتنی بر الگوی اعتقاد بهداشتی بر اگاهی و عملکرد زنان بالای ۹۴ سال در شهر همدان

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زمینه و هدف: خودآزمایی پستان یکی از راه‌های تشخیص زودرس سرطان پستان زنان است. این مطالعه با هدف تعیین تأثیر مشاوره آموزشی خودآزمایی پستان مبتنی بر الگوی اعتقاد بهداشتی بر عملکرد زنان بالای ۹۴ سال در شهر همدان صورت گرفت.

روش بررسی: این مطالعه به صورت نیم تجربی دو گروهی انجام شد. ۱۵۰ نفر از زنان واجد شرایط برخوردار مشاوره بهداشتی در مرکز بهداشت همدان در سال ۱۳۹۴ به گروه‌های کنترل و آزمون تخصیص داده شدند. ۲۴ نفر در هر گروه به صورت تصادفی انتخاب شدند. مداخله در گروه آزمون در طی ۵ جلسه مشاوره غربالگری سرطان پستان بر اساس الگوی اعتقاد بهداشتی انجام گرفت. گروه کنترل فقط مرکز مراقبتی روتین را دریافت کردند. میزان آگاهی، سازه‌های اعتقاد بهداشتی و عملکرد در هر دو گروه قبل و بعد از مداخله با استفاده از پرسشنامه و چک لیست خودآزمایی پستان مورد بررسی قرار گرفت.

یافته‌ها: نتایج مطالعه نشان داد که اختلاف معنی‌داری در نمرات اگاهی، اعتقاد بهداشتی و عملکرد بین دو گروه ازون و کنترل دیده نشد. نتایج تحلیل گروهی نشان داد که اختلاف معنی‌داری بین دو گروه ازون و کنترل در نمرات اگاهی، اعتقاد بهداشتی و عملکرد دیده شد.

نتیجه‌گیری: نتایج حاکی از اهمیت مشاوره در ارتقاء آگاهی، باورها و بهبود عملکرد خودآزمایی پیشگیری از سرطان پستان در زنان بالای ۹۴ سال است.
بررسی اثر ترکیب 2-(phenylthio)benzoic acid (5-nitro-2-furyliedene) hydrazide (A) در درمان موشی سرطان سینه:

زهرا کوشافر 1، مونا سليمی 2، آمنه جاوید 1

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سرطان سیتیک در ماهیت بهداشتی مهم برای زنان در سراسر دنیا محسوب می‌گردد. سرطان سینه یکی از مدل‌های متاستاتیک سرطان در موش بیشتر مورد توجه محققین قرار گرفته است. در این مطالعه اثر ضد توموری ترکیب هیدرازونی نامیده‌ شده‌ای است که بر مدل موشی تومور سینه استفاده شده‌است.

در این مطالعه، 40 موش سری بلویال برای انجام مطالعه به میزان سن 4 تا 2 هفته تقسیم شدند: یک گروه کنترل مثبت (محیط بومی، نازک و درمان نشده)، یک گروه کنترل منفی (محیط بومی، نازک و درمان نشده) و 3 گروه موشی تحت درمان بود. در این گروه‌ها، ترکیب A به مقدار 50، 10، و 1 mg/kg در ماهیت IP (اندوز) به مقدار 20 میکرولاور تزریق گردید. ترکیب به صورت داخل صاقعی در ناحیه غدد ماهیت تزریق گردید. در نتیجه، نتایج نشان داد که با گذشت 1 هفته و افزایش اندازه تومورها در موشی Balb/c، ترکیب A در دوز 10 باعث کاهش اندازه تومورها می‌شود. با توجه به مطالعات سایر ترکیب‌ها، می‌توان به توجه به این ترکیب، می‌توان به دلیل اینکه باعث افزایش هیدرازون‌های تولیدی می‌شود، این ترکیب موثر در درمان سرطان به‌کار رفته و به‌عنوان یک ترکیب اثرگذار در درمان سرطان سینه مطرح نمی‌شود.

در نهایت، نتایج این مطالعه نشان می‌دهند که ترکیب A باعث کاهش اندازه تومورها می‌شود و می‌توان به عنوان یک ترکیب احتمالاً جهت درمان سرطان سینه مورد بررسی قرار گیرد.
بررسی اثر ترکیب (phenylthio)benzohydrazide (B)

در اندازه ی تومور در مدل موشی سرطان سینه

سوده دهقانی 1 مونا سلیمی* 2، نرگس نیکونهاد 1

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امروزه سرطان، مهم ترین عامل مرگ و میر در میان زنان و مردان است و از این میان، سرطان سینه دومین سرطان شایع در میان زنان محسوب می‌گردد. شیمی درمانی، پرتودرمانی و جراحی از راه‌های مطرح درمان سرطان است که شیمی درمانی، یکی از راه‌های اصلی درمان سرطان است. است. اما استفاده از داروهای شیمیایی برای سلول‌های سالم نیز بسیار سالم نیست و برای پیامدهای پس از دریافت داروهای هم‌نامه‌ای مشابه مصرف نمی‌گردد. بنابراین، به منظور کاهش افزایش داروها در حیاتی بودن آنها هم‌نامه با داروهای دیگر مصرف نمی‌گردد. این اتفاق باعث ایجاد مشتقات نیست. مطالعات پیشین نشان داده اند که این مشتقات هیدروزیم‌های ضدسرطانی قابل توجهی از خودشان نشان داده‌اند. به این دلیل، بودن این راه‌های درمانی به‌طور مشابه درمانی جدیدی از این سری ترکیب‌ها در مدل موشی تومور پستان بررسی نماییم. در این طرح، 50 موش سوری ماده نژاد BALB/c، سن 4 تا 2 هفته، از انستیتو پاستور خریداری و با سلول‌های سرطانی T1 (بصورت تزریق تحت درمان قرار گرفتند) به گروه (n=10) تقسیم شدند. گروه کنترل مثبت (متصل به سرطان و درمان نشده) و گروه کنترل منفی (سالم) بودند. گروه شیمیایی با دوزهای مختلف 1، 10، 40 mg/kg به درمان گرفتند. نتایج نشان داد که با گذشت زمان، اندازه ی تومور در موش‌های درمان شده با دوز 1، 10، 40 mg/kg کاهش یافته است. این کاهش از هفته ی دوم آغاز شده و در هفته سوم به شدت بیشترین کاهش اندازه ی تومور در موش‌های بود. با توجه به نتایج پذیرش که درمان شده با دوز 1، 10، 40 mg/kg کاهش یافته است، ترکیب شیمیایی (phenylthio)benzohydrazide (B) جهت کاهش نیاز دارد تا نتایج تایید گردد.
نقش ذن VE-Cadherin در بروز تهجم و رشد تومور در بیماران مبتلا به سرطان پستان

سرطان پستان یکی از شایع‌ترین سرطان‌ها در خانم‌ها بوده که به‌طور کلی از هر 10 زن یک نفر به این بیماری مبتلا است؛ بنابراین یک نیاز فوری برای درمان سرطان پستان با توجه به عدم تشخیص به‌هنگام این بیماری و همچنین میزان مرگ‌ومیر بالا آن وجود دارد. در این مطالعه به منظور بررسی ارتباط بیشتر بین ذن VE-cadherin و مشخصات پاتولوژی و کلینیکی بیماران مبتلا به سرطان پستان، 50 نمونه خون بیماران مبتلا به سرطان پستان و 50 نمونه خون سالم از بیمارستان شهید رجایی بابلسر درآمده و زنده تهیه شده و سپس استخراج RNA و سنتز cDNA انجام گرفته و بررسی با استفاده از PCR و و استخراج RNA از نمونه‌ها و سنتز cDNA بر روی روز الکتروفورز بین ذن VE-cadherin در مرور بیماران سرطان پستان وجود دارد و بیان آن در stage I و grade I با توجه به تحقيقات انجام‌شده به نظر می‌رسد. VE-cadherin نواحیی از عوامل مؤثر در پیش‌آگهی سرطان پستان یادش جهت به دست آوردن نتایج قطعی و تعیین نقش VE-cadherin در بیش‌آگهی سرطان پستان انجام Real Time PCR و بررسی همزمان سایر نشان‌گر‌های تومور ارزشمند می‌باشد.