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Systematic Review of Diagnosis and Treatment of Cancer

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Abstract

Cancer is characterized by proliferation of cells that have managed to evade central endogenous control mechanisms. Cancers are grouped according to their organ or tissue of origin, but increasingly also based on molecular characteristics of the respective cancer cells. Due to the rapid technological advances of the last years, it is now possible to analyze the molecular makeup of different cancer types in detail within short time periods. The accumulating knowledge about development and progression of cancer can be used to develop more precise diagnostics and more effective and/or less toxic cancer therapies. In the long run, the goal is to offer to every cancer patient a therapeutic regimen that is tailored to his individual disease and situation in an optimal way.

Keywords: Breast Cancer, Colorectal Cancer, Lung Cancer, Prostate Cancer, Skin Cancer, Cancer Treatments.

Introduction to Cancer

What is Cancer?

Your body is composed of many millions of tiny cells, each a self-contained living unit. Normally, each cell coordinates with the others that compose tissues and organs of your body. One way that this coordination occurs is reflected in how your cells reproduce themselves. Normal cells in the body grow and divide for a period of time and then stop growing and dividing. Thereafter, they only reproduce themselves as necessary to replace defective or dying cells. Cancer occurs when this cellular reproduction process goes out of control. In other words, cancer is a disease characterized by uncontrolled, uncoordinated and undesirable cell division. Unlike normal cells, cancer cells continue to grow and divide for their whole lives, replicating into more and more harmful cells. The abnormal growth and division observed in cancer cells is caused by damage in these cells' DNA (genetic material inside cells that determines cellular characteristics and functioning). There are a variety of ways that cellular DNA can become damaged and defective. For example, environmental factors (such as exposure to tobacco smoke) can initiate a chain of events that results in cellular DNA defects that lead to cancer. Alternatively, defective DNA can be inherited from your parents. As cancer cells divide and replicate themselves, they often form into a clump of cancer cells known as a tumor. Tumors cause many of the symptoms of cancer by pressuring, crushing and destroying surrounding non-cancerous cells and tissues. Tumors come in

two forms; benign and malignant. Benign tumors are not cancerous, thus they do not grow and spread to the extent of cancerous tumors. Benign tumors are usually not life threatening. Malignant tumors, on the other hand, grow and spread to other areas of the body. The process whereby cancer cells travel from the initial tumor site to other parts of the body is known as metastasis.

Cancer Subtypes Though cancer is often thought of as a single disease there are in fact many different cancer variations. Each different type of cancer has a different set of risk factors, different rates of progression, different treatment options, and a different prognosis. Further, the subtypes of cancer get classified and named based on the area of the body where they are originally observed. For instance, breast cancer starts in the breast and lung cancer begins in the lungs. Though cancers do share disease processes in common, there is not really one form of cancer; there are, instead, many different types. We have elected to provide more detailed information on five of the most common types of cancer in the following sections of this topic center. These five subtypes are: breast cancer, colorectal cancer, lung cancer, prostate cancer, and skin cancers. These subtypes were chosen based on their being either common, or representative across sexes. For each of these cancer subtypes we highlight information regarding symptoms, prevention, diagnosis and treatment. Please look towards more cancer-specific resource websites and books if you require information on forms of cancer we have not been able to cover.

- Breast Cancer
- Colorectal Cancer
- Lung Cancer
- Prostate Cancer
- Skin Cancer

Breast Cancer:

Breast cancer occurs when a malignant (cancerous) tumor originates in the breast. As breast cancer tumors mature, they may metastasize (spread) to other parts of the body. The primary route of metastasis is the lymphatic system which, ironically enough, is also the body's primary system for producing and transporting white blood cells and other cancer-fighting immune system cells throughout the body. Metastasized cancer cells that aren't destroyed by the lymphatic system's white blood cells move through the lymphatic vessels and settle in remote body locations, forming new tumors and perpetuating the disease process. Breast cancer is fairly common. Because of its well publicized nature, and potential for lethality, breast cancer is arguably the most frightening type of cancer diagnosis someone can receive. However, it is important to keep in mind that, if identified and properly treated while still in its early stages, breast cancer can be cured. Breast cancer is not just a woman's disease. It is quite possible for men to get breast cancer, although it occurs less frequently in men than in women. Our discussion will focus primarily on breast cancer as it relates to women but it should be noted that much of the information is also applicable for men.

Colorectal Cancer:

The term "colorectal" is a contraction of two terms, 'colon' and 'rectum'. Parts of the digestive system, the colon is the name given to the last six or so feet of the intestine (otherwise known as the large intestine), and the rectum is the name for the last several inches of the large intestine just before it exits the body via the anus. Colorectal cancer occurs when abnormal tissues grow on the inner walls of the colon or rectum. These abnormal tissues commonly present in the form of polyps. Polyps grow as a projection of tissue away from the colon wall, remaining connected to the colon wall by way of a thin stalk. Their shape is similar to that of a mushroom. Polyps are fairly common, especially in older people. The vast majority of polyps are not cancerous. However, some polyps will eventually become cancerous. Unchecked, a cancerous polyp gives rise to a tumor, which grows in size until it penetrates the bowel wall and involves adjacent organs and lymph nodes through the process known as metastasis. Colorectal cancer is the third most prevalent cancer

in the United States and, when undetected and untreated, the third most deadly (ACS, 2008). Approximately 150,000 new cases of colorectal cancer are diagnosed each year, and about 50,000 Americans die each year from colorectal cancer (ACS, 2008). While these statistics are alarming, it is important to remember that if caught early enough, colorectal cancer can often be cured. Early detection and removal of polyps can even prevent pre-cancerous polyps from becoming cancerous.

Lung Cancer:

Lung cancer occurs when a malignant (cancerous) tumor grows inside the lungs, in structures such as the bronchi (small tubes that connect the windpipe to the inner surfaces of the lungs where gas transfer takes place). Like many other types of cancer, lung cancer is capable of spreading (metastasizing) to other parts of the body. In this case, cancer beginning in the lungs most commonly spreads to the brain, bones, adrenal glands and liver, via any of three mechanisms: direct extension, via the blood vessels, or via the lymph system. Direct extension occurs when a tumor grows rapidly in size such that it begins to touch an adjacent organ or structure, and then begins to penetrate itself into that adjacent organ or structure. Tumor cells are also able to get into the blood and lymph circulatory systems and travel, one by one, to distant structures. Lung cancer is now the most prevalent form of cancer affecting Americans with an estimated 222,500 new cases every year, according to the American Cancer Society (ACS, 2010). Beyond being the most common form of cancer, lung cancer is also often difficult to treat. As a result, lung cancer is the most deadly cancer with roughly 160,000 Americans dying from it every year. This is about 30% of all cancer deaths! (ACS, 2010). Although lung cancer is difficult to treat and cure, it is for the most part preventable. Lifestyle choices can be made which can almost eliminate your risk for getting the disease. Your decision to stop smoking and to eat a healthy diet featuring plenty of fresh fruits and vegetables can greatly decrease your risk.

Types of Lung Cancer

Lung cancers are broken down into two major types, small cell lung cancer and nonsmall cell lung cancer. The difference between the two types involves where they originate, how fast they grow, and how they are best treated.

Small cell lung cancers comprise roughly 15% of all lung cancer cases (ACS, 2010). This type of lung cancer originates in an inner layer of the walls of the bronchi called the bronchial submucosa, and grows aggressively (in comparison with nonsmall cell lung cancers), quickly spreading into surrounding tissues, and ultimately, through the body. Though the growth of this cancer is rapid, there are few or no clues that anything is particularly amiss. Symptoms are generally not noticeable until the cancer has spread into other parts of the body. Because of their rapid growth pace and tendency to metastasize, small cell cancers are described with only two stages (limited – when spread is contained to the localized area of the lung and immediate surrounding tissues, and extensive – when the cancer has spread throughout the body). By the time patients present for treatment, small cell lung cancers have generally reached their extensive stage. Treatment generally takes the form of a combined chemotherapy and radiation therapy approach.

Non-small cell lung cancers comprise about 85% of all lung cancers and can be broken down into three subtypes; squamous cell carcinoma, adenocarcinoma, and large cell lung cancer (ACS, 2010). Treatment of these types of cancer typically includes a combination of surgery, chemotherapy and radiation therapy.

- **Squamous cell** carcinoma most often begins in the larger sections of the bronchi. It progresses slowest of all of the lung cancers.
- **Adenocarcinomas** have the fastest growing incidence of any type of lung cancer in the United States, reported with frequency in both smokers and persons who never smoked. They typically occur at the periphery of the lungs, and grow more aggressively than squamous cell forms of lung cancer.

- As the name suggests, **large cell** lung cancers form as clusters of large undifferentiated cells. Like ademocarcinomas, they tend to occur at the periphery of the lung, growing and spreading more aggressively than squamous cell forms of lung cancer.

Prostate Cancer:

The prostate is a gland that exists in men only, as a part of their reproductive system. Its primary purpose is to manufacture the liquid part of semen (male reproductive fluid); the actual active ingredient in semen, the sperm, is produced in the testicles. The prostate also helps to control urination based on its placement surrounding the urethra. Prostate cancer occurs when a malignant (cancerous) tumor starts to grow inside the prostate. The American Cancer Society reports that 1 in 6 men will get prostate cancer at some point during their lives and that 1 in 36 men will die from the disease (ACS, 2010). Prostate cancer is relatively common, with some 2230,000 American men diagnosed each year (ACS, 2010). It can lead to conditions such as impotence (inability to have an erection) and loss of bladder control, and in a minority of cases it can be lethal. Luckily, most prostate cancers are caught early enough to be treated effectively. Thus the long term survival rate is very high.

Skin Cancer:

When we think about the prominent organs that make up our bodies, we think of the heart, the lungs, the brain and perhaps the liver. Seldom would we think about our humble skin. However, our skin is actually the largest of our organs and plays as vital a role in maintaining our lives as those other more popular organs. The main function of the skin is to act as the first line of defense for the body. Skin protects and buffers the body from being damaged by heat, chemicals, ultraviolet radiation, bacteria and other biological contaminants and physical impacts. Via our ability to sweat and shiver, our skin also helps us to maintain our body temperature and fluid balance. It even serves as the medium for our sense of touch. Skin is constructed of two major layers: the epidermis (or surface layer), and the dermis (or interior layer). The thin epidermis layer is composed of constantly renewing layers of cells called keratinocytes which rise in layers from the interior of the epidermis only to get sloughed off at the surface, and other supporting cell types including melanocytes (pigmented cells responsible for skin color or freckles), dendritic cells (involved in skin immune function), and basal cells. The thicker, deeper dermis layer is composed of connective tissues and embedded blood vessels, nerve and sensory fiber endings, oil and sweat glands, body hair follicles and a variety of other structures. Like any other organ in the body, the skin is subject to cancer. Skin cancer occurs when malignant (cancerous) growths or tumors form on or in the skin. Today, skin cancer is the most prevalent form of cancer, accounting for about 50% of all cancer cases reported annually, according to the American Cancer Society (ACS, 2010). Skin cancers are divided into two major forms: Nonmelanomas and Melanomas. These cancer subtypes are largely differentiated based on where in the skin layers they form.

- **Melanoma.** Melanoma is a form of skin cancer that affects the melanocytes in the epidermis. Melanocytes are special skin pigment cells that give our skin color, and which allow our skin to “tan” when exposed to ultraviolet light from the sun. The darkening of the skin we call tanning provides the deeper body tissues extra protection from ultraviolet radiation.Melanoma skin cancer will effect roughly 70,000 Americans in 2010 and roughly 12,000 Americans will die from melanoma in 2010 (ACS, 2010). The danger posed by melanoma is largely due to the risk of metasteses; Melanoma is much more likely to spread to other parts of the body, and to do so faster, than are non-melanoma skin cancers. As is the general case, metastasized cancers are harder to successfully treat than are localized cancers. Melanoma skin cancer is quite treatable provided it is caught early on

before significant metastasis has taken place.

- **Non-melanoma.** As the non-creative name suggests, non-melanoma skin cancer is a sort of "blanket" term used to group together the types of skin cancer that aren't melanoma. There are two primary forms of non-melanoma skin cancer, and a handful of other rare non-melanoma types which will not be covered here.
- **Basal cell** Carcinomas begin in the basal cell layer of the epidermis (the most interior part of the outer skin layer). Basal cell skin cancers are common, and typically appear on the head, neck, arms, and other body parts frequently exposed to the sun. Basal cell carcinomas tend to progress very slowly and usually do not spread to other parts of the body.
- **Squamous Cell** Carcinomas originate in the outer layers of the epidermis. Like basal cell carcinoma they most commonly appear on areas of the body most exposed to the sun, although they can appear on the genitals as well. Squamous cell carcinomas rapidly progress to involve deeper dermal layers of the skin tissue but (like basal cell carcinoma) are unlikely to spread to other parts of the body.

Stages of Cancer

Following a positive identification of cancer, doctors will try to establish the stage of the cancer. Cancers are ranked into stages depending on the specific characteristics that they possess; stages correspond with severity. Determining the stage of a given cancer helps doctors to make treatment recommendations, to form a likely outcome scenario for what will happen to the patient (prognosis), and to communicate effectively with other doctors. There are many stage scales that are used. One of the most common stages of cancer was the five most difficult stages: 0, I, II, III, and IV. Category 0 cancer is a relatively new cancer that affects only a few cells. Stages I, II, III, and IV represent the most advanced cancers, characterized by larger tissue size, more tissue, violence in which the cancer grows and spreads, and the extent to which the cancer has spread to nearby tissues. Another popular category system is known as the TNM system, which is three times more likely to spread cancerUsing the TNM system, physicians measure the cancer they get on each of the three scales, where T stands for tumor size, N represents lymph node involvement, and M represents mastastasis (the extent to which cancer has spread beyond its original location). Large numbers on each of these three scales indicate that cancer is very high. For example, a large tumor that has not yet spread to other parts of the body can be compared to T3, N0, M0, and a smaller but more aggressive cancer can be compared to T2, N2, M1 which promotes a moderate tumor that spreads to local lymph nodes and has just started in a new organ. A nd another graphics program, called the abridged stage, is used by the National Cancer Institute for its SEER program. Summary categories include: "In situ" or early cancer (stage 0 cancer), "localized" cancer that has not yet begun to spread, "regional" cancer that has spread to lymph nodes but not yet to distant organs, "distant" cancer that has spread to distant organs, and finally, “unknown” cancer to describe anything unequal elsewhere.individual circumstance. These factors often include the cancer's stage (type, location, and size of the cancer being treated), as well as patients' age, medical history, and overall health. The doctor may also ask patients to specify their treatment preferences before determining an optimal treatment plan. So long as their condition does not require emergency intervention, patients should feel free to ask questions about various treatment options so as to become comfortable with the plan they will ultimately follow. In general, it is not a good idea to rush into a treatment plan merely as a way to reduce the understandable anxiety of having a cancer diagnosis.each situation. These factors usually include the stage of the cancer (type, location, and severity of the cancer being treated), as well as the age of the patients, medical history and overall health. The doctor may also ask patients to define their treatment preferences before deciding on a treatment plan. As long as their

condition does not require immediate intervention, patients should feel free to ask questions about the various treatments so that they are comfortable with the plan they will eventually follow. In general, it is not a good idea to rush into a treatment program just to alleviate the underlying cause of cancer. Each type of cancer is unique and requires a variety of treatment options. Of course, there are two common methods used to treat almost all types of cancer. These two therapies are chemotherapy and radiation. Chemotherapy and radiation therapy are covered here with some details to avoid prolonged duplication of information in later parts including certain cancer subtypes.

Cancer Treatments

Doctors prescribe cancer treatments based on a variety of aspects of Chemotherapy for patients. Chemotherapy is one of the most widely used treatments for cancer patients. It is usually prescribed for patients with undiagnosed cancer but instead may be altered, or spread, to various parts of the body. Chemotherapy can be used to reduce the symptoms and pain associated with cancer and to slow the growth of cancerous growths. In some cases chemotherapy can even kill the cancer cells. Chemotherapy uses a combination of drugs that are taken orally or injected directly into the bloodstream. Drug doses are usually given with a recurring pattern over a set period of time. The frequency of treatment and the duration of your duration depend on the type of cancer each patient has, and how well the patient tolerates and responds to medication. Chemical agents target cells in the body which separate and grow rapidly and are often able to destroy these cells. Unfortunately, cancer cells are not the only cells in the body that divide and replicate. In addition to cancer cells, chemotherapy kills other normal healthy cells, causing side effects such as fatigue, nausea, and hair loss. To some extent, side effects can be controlled or mitigated by other medications or by changing the chemistry. It is important to inform your doctor immediately if you experience side effects so that the doctor can adjust the treatment so that you feel comfortable. Chemotherapy can be a long and difficult process, but it does not last long and the side effects usually disappear when treatment is completed.

- **Radiation Therapy** Radiation therapy is a form of radiation therapy. Radiation is widely used to treat local cancer in contrast to cancer that spreads throughout the body. The purpose of radiation therapy is to kill cancer cells or at least reduce their ability to grow and differentiate by damaging their environment. . Radiation therapy is a form of radiation therapy. Radiation is widely used to treat local cancer in contrast to cancer that spreads throughout the body. The purpose of radiation therapy is to kill cancer cells or at least reduce their ability to grow and differentiate by damaging their environment. Like chemotherapy, radiation therapy is less specific to cancer cells, and some normal, healthy cells can also be damaged. Patients should not worry too much about damage to healthy cells, however. Doctors often do a good job of protecting and protecting healthy cells from cancer cells from radiation damage. Also, healthy cells that cause injury during radiation therapy are often able to repair their genes when treatment is over.

Causes of Cancer

The causes of cancer are not fully understood, but years of research have identified risk factors that increase people's chances of developing certain types of cancer. Some of these risks are unavoidable, while others can be avoided by choosing to live a healthier life. For example, exposure to secondhand smoke can have a harmful effect on consumers. Changing your lifestyle to eliminate unhealthy choices such as smoking can be difficult to achieve (smoking cessation and quitting smoking means beating that habit), but the rewards are real. Quitting smoking and similar lifestyle changes will not guarantee you will never get cancer, but it will reduce the risk of your cancer. This is true even if you have never had cancer before, or if you have had cancer before and are wondering what you can do to reduce your

chances of relapse. It is important to note that cancer is not the same disease, but there are many ways. Each type of cancer is different and therefore has different risk factors. Detailed information on the specific risk factors for certain types of cancer can be found in our cancer documentation below.

Drug used in Treatment Of Cancer

Chemotherapy Drugs:

The term chemotherapy, or chemo., Refers to a variety of drugs used to treat cancer. These drugs usually work by killing the dividing cells. Since cancer cells have lost much of the control functions present in normal cells, they will continue to try to differentiate when other cells do not. This feature makes cancer cells available to various cell types. Chemotherapy agents work to kill cells in a variety of ways. Some drugs are naturally occurring compounds identified in various plants and some are man-made chemicals. A few different types of chemotherapy treatments are briefly described below. For more information on a particular drug, select from the list below..

Antimetabolites In order to understand antimetabolites and how they work, it is important to briefly discuss the processes targeted by these agents. The term metabolism refers to the many chemical reactions that take place in our bodies. We regularly break down food into useful substances and use them to build proteins, DNA, and other cellular structures. Metabolite is the generic name for organic compounds that are synthesized, synthesized, or broken down into cells. The substances that give us the key metabolites enter our body like food. These compounds can be decomposed into simple structures that can be reused in our cells. Examples include vitamins and amino acids. Metabolites are the last products of a process or process that can be excreted by the body. An example is urea, the final product of protein metabolism, which is excreted by the body as part of the urine. Antimetabolites are similarly metabolites, but they cannot be used by the body in a productive way. In the cell, antimetabolites are mistaken for similar metabolites, and are processed in the cell in the same way as normal genes. The presence of 'decoy' antimetabolites prevents cells from performing vital functions and cells fail to grow and survive. Many antimetabolites used in cancer treatment disrupt the production of nucleic acids, RNA, and DNA. 2 When new DNA is not synthesized, cells fail to differentiate.

How Antimetabolites Work: 5-FU

Interaction with Thymidylate Synthase: The last way in which 5-FU can inhibit normal DNA synthesis is its ability to prevent the synthesis of thymine nucleotides from uracil nucleotide. Thymine differs from uracil in the presence of the methyl group (one carbon unit) in the 5th carbon in the pyrimidine ring. This methyl group is added by an enzyme called thymidylate synthase. When a 5-FU molecule is in the nucleotide instead of uracil, the enzyme cannot add a methyl group to 5th carbon due to the fluoride atom in that 5-FU. This modification of the common pyrimidine gives the drug its name. Methyl supplementation is required in the conversion of uracil nucleotide into thymine nucleotide, and without this step, thymine nucleotides cannot be synthesized and are not available for DNA synthesis.

Folate Antagonists

Folate antagonists, also known as antifolates, inhibit dihydrofolate reductase (DHFR), an enzyme involved in the formation of nucleotides. When this enzyme is blocked, nucleotides are not formed, which interferes with DNA replication and cell division. Methotrexate is the main antagonist of folate used as a chemotherapeutic agent. It can be used alone or in combination with other anti-cancer drugs.

Drug Discovery

In 1948, a diet low in folic acid was found to be leading to a decrease in leukemia cell count. That discovery began with the search for deliberate opponents. That same year, a false antagonist, aminopterin, was diagnosed with ammunition in childhood leukemias. Methotrexate was discovered shortly thereafter, and it appeared to be a highly effective, non-toxic folate analogue. Since then, and without the isolation of many other folate antagonists, methotrexate retains its vital role in the treatment of breast cancer, osteogenic sarcoma, and leukemias.

How Folate Antagonists Work: Methotrexate Folic acid is a growth factor () that provides pre-precipitated carbon used for the formation of nucleotides used in the formation of DNA and RNA. Folate antagonists, also known as antifolates, act by blocking the active site of dihydrofolate reductase (DHFR), an enzyme that reduces folic acid in its active form. Active co-enzymes are needed for methylation in various metabolic processes, where they bring the methyl groups (single carbon units) to specific molecules. Inhibition of dihydrofolate reductase keeps folic acid in a state of inactivity. Decreases in the number of active infections are thought to cause a decrease in methylation, preventing the necessary action in the formation of purine and the formation of thymidylate. When acidic () acid formation is compromised due to nucleotide deficiency, cell growth is disrupted. 4Methotrexate is the most widely used folate

Genotoxic Drugs

- Genotoxic drugs are chemotherapy agents that affect nucleic acids and alter their function. These drugs can bind directly to DNA or can lead to DNA damage by affecting enzymes involved in DNA replication. In the event of insufficient damage to the cell's DNA it will often develop apoptosis, equivalent to cellular suicide.
- Therapeutic approaches to genotoxic chemotherapy include:
- **Alkylating agents:** The first phase of chemotherapy agents used. These drugs alter the DNA bases, which disrupt DNA replication and transcription and lead to mutations
- **Intercalating agents:** These drugs encapsulate the space between the nucleotides in the DNA helix twice. They interfere with writing, duplication and make genetic modifications. **Enzyme inhibitors:** These drugs block important enzymes, such as topoisomerases, that are involved in DNA replication that causes DNA damage**.** The purpose of treatment for any of these is to damage DNA damage to cancer cells. DNA damage, if large enough, will cause cells to experience apoptosis, which is equivalent to cellular suicide. Genotoxic chemotherapy drugs affect normal and cancerous cells. The choice of drug action is based on the sensitivity of rapidly dividing cells, such as cancer cells, to DNA-damaging treatment. Immediate detection of cells, such as those that attach to the intestines or stem cells in the bone marrow, is often killed along with the cancer cells.2 In addition to being cytotoxic (toxic), these drugs are also mutagenic (cause) and nic (cause cancer). . Treatment with these drugs is associated with an increased risk of secondary cancers, such as leukemia. These drugs are used to treat various forms of solid cancer and leukemia, often in combination with other drugs.2
- **How do Alkylating Agents Work?** The mechanism of action of alkylating agents is the formation of nucleotide dysfunction leading to genetic mutations. In normal DNA helix, A's regularly interact with alkylating agents that work in three different ways. They all achieve the same end result - disruption of DNA function and cell death. In the first machine the alkylating agent (represented by the figure below as a pink star) attaches the alkyl groups (small chemical carbon-represented as pink triangles) to the DNA bases. This mutation leads to DNA fragmentation by repair enzymes in their attempt to alter alkylated foundations (frame 3 of the diagram below). Alkylated

foundations prevent DNA binding and RNA transcription from the affected DNA. The second method by which alkylating agents cause DNA damage is the formation of short bridges, the bonds between atoms in the DNA (pink links below). In this process, the two bases are connected together by an alkylating agent with two binding sites of DNA. Bridges can be built within a single DNA molecule (as shown below) or a cross bridge can connect two DNA molecules. Shortcut connections prevent DNA from being broken down for processing or transcription. Third (opposite) T and G every two pairs and C.

CONCLUSION

Early cancer screening is an important part of the overall cancer control program. It facilitates early detection of cases, when the treatment is effective and there is a greater chance of treatment.

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