Basics of Cancer Treatment

Target Audience:

- *Community members*
- *Staff of Indian health programs, including Community Health Representatives*

Contents of Learning Module:

- *Instructor's Guide with Pre/Post Self-Assessment*
- *PowerPoint presentation*
- *Glossary*
- *References*

Length:

- *Introduction of session/module overview (:05)*
- *Pre self-assessment (:07)*
- *Presentation of module including interactive activity (:30)*
- *Optional video: AI/AN Clinical Trials and Native People—A Gift for Our Children (24)*
- *Post self-assessment (:05)*
- *Closing (:03)*

Goals

In this session, participants will gain a basic understanding of common cancer treatments, and their potential side effects.

Objectives

At the completion of Learning Module 4, participants will be able to demonstrate the following:

Section 1

a) Discuss the Western and traditional approach to cancer treatment and why both are important to use in the fight against cancer.
b) Discuss the difference between local and systemic treatment for cancer.
c) Describe the reason side effects commonly occur with cancer treatment.

Section 2

a) Describe at least two side effects that can occur as a result of cancer treatment.

Measures of Objective Accomplishment

The presenter will administer a pre self-assessment and post self-assessment to measure participants' knowledge of the module's objectives. The pre self-assessment measures existing knowledge and the post self-assessment measures what was gained through the learning module.

NOTE

- Each major learning point is clearly identified by **boldface** type throughout the guide and emphasized in the PowerPoint presentation.
- See the glossary (at the end of the module) for words that are in ***bold italics*** throughout the module.

Pre/Post Self-Assessment

Cancer Treatments

Do you agree (A) or disagree (D) with these statements, or are you not sure (NS)? Circle Choice A, D, or NS.

1.	**A**	**D**	**NS**	Cancer treatment may consist of several methods such as surgery, chemotherapy, radiation therapy, hormonal therapy, and biological therapies.
2.	**A**	**D**	**NS**	Side effects of cancer treatment are the same for all people.
3.	**A**	**D**	**NS**	Biological therapies tend to cause flu-like symptoms.
4.	**A**	**D**	**NS**	The purpose of clinical trials is to find better ways to treat cancer.
5.	**A**	**D**	**NS**	Systemic treatments travel through the bloodstream, reaching cancer cells all over the body.

Section 1
How We Become Well Again

There are a number of different ways to treat cancers. **For many AI/AN diagnosed with cancer, treatment often involves a blend of both Western and traditional medicine.** While Western medicine uses an approach based on science and is focused on the physical aspect of disease, traditional medicine emphasizes the use of sacred rituals and healing ceremonies to restore a person to a state of wellness that includes the physical, emotional, mental and spiritual dimensions of health. Both methods are necessary in the fight against cancer.

For many AI/AN facing cancer treatment, the use of traditional healers and traditional medicine is also an important part of becoming well again. Traditional healers who work with AI/AN generally establish a long-term relationship with the person affected by the disease. This relationship often extends beyond the affected individual to include the family. **The healer uses a variety of skills that are culturally acquired to design a treatment plan that will focus on the "whole person".** Traditional healers working with AI/AN undergoing treatment for cancer provide the spiritual and emotional support necessary to aid the individual in their fight against cancer (Burhannstipanov (1997). **The goal of treatment is centered on using the power of the mind, the body, the spirit, and the natural environment in the healing process to restore harmony and balance (Kim & Kwok, 1998).**

The Western medical approach to cancer involves a team of doctors (***surgeons***, *medical oncologists*, ***radiation oncologists***, and others) who specialize in the treatment of people with cancer. The team of doctors develop a treatment plan to fit each person's situation based on their cancer diagnosis. The treatment plan may include ***surgery, chemotherapy, radiation therapy, hormone therapy or biological therapies, or participation in a clinical trial***.

Treatment for cancer depends on the type of cancer, the size, location and stage of the disease, the person's general health, and other factors. Treatment for cancer can be either local or systemic. ***Local treatments*** affect cancer cells in the tumor and the area near it. ***Systemic treatments*** travel through the bloodstream, reaching cancer cells all over the body. Surgery and radiation therapy are types of local treatment. Chemotherapy, hormone therapy, and biological therapy are examples of systemic treatment.

Because cancer treatment damages healthy cells and tissues in addition to cancer cells, it often causes *side effects*. Side effects of cancer treatment depend mainly on the type and extent of the treatment. Also, the effects may not be the same for each person, and they may change for a person from one treatment to the next. Patients undergoing treatment for cancer are closely monitored by the specialists (medical oncologists and others) involved in their care. This team of specialists provides education on side effects that may occur during and after treatment, and ways to manage or lessen the effects. **When traditional medicine is combined with Western medicine in the treatment of cancer, sharing information about treatment is important. The use of traditional practices such as sweat baths or hot springs baths, etc. may affect some medications and therapies.** Thus, both medical specialist and healer should be aware that the patient is using both approaches.

The goals of treatment vary according to the situation. A particular treatment might be recommended because it offers the best chance of a cure. When cure is not possible, treatment may improve the quality of life by relieving pain, pressure and other symptoms of cancer. **Whatever treatment plan is used, AI/AN are most likely to benefit when the plan is focused on a holistic approach to care that may involve a blending of Western and traditional medicine. Such an approach addresses not only the physical illness but also the mental, emotional, and spiritual dimensions of the disease.**

Section 2
Treatment Methods

The following is a description of common methods used in the treatment of cancer in Western medicine:

Surgery

Refers to removing the cancerous tumor and possibly the removal of surrounding tissue and lymph nodes near the tumor. *Surgery* is most effective when the cancer is still confined to its original site and when the tumor can be completely removed. Sometimes surgery is done on an outpatient basis (in and out the same day), or the patient may stay overnight in the hospital. This decision depends mainly on the type of surgery and the type of ***anesthesia***. The side effects of surgery depend on many factors, including the size and location of the tumor, the type of operation, and the patient's general health. The discomfort that may occur after surgery can be controlled with medicine. Patients may also feel tired or weak for a while after surgery. The length of time it takes to recover from an operation varies among patients.

Some patients have concerns that cancer will spread during surgery. This is a very rare occurrence. Surgeons use special techniques and take many precautions to prevent cancer from spreading during surgery. For example, if tissue samples must be removed from more than one site, they use different instruments for each one. Also, a margin of normal tissue is often removed along with the tumor. Such efforts reduce the chance that cancer cells will spread into healthy tissue.

Chemotherapy

Refers to the use of drugs to kill cancer cells. It is a systemic treatment, meaning that the drugs flow through the bloodstream to nearly every part of the body. *Chemotherapy* primarily works by

attacking cells that divide and grow rapidly, such as cancer cells. The doctor may use one drug or a combination of drugs.

Chemotherapy is used most often when there is a possibility that cancer cells may be located somewhere other than the primary tumor. It may be the only kind of treatment a patient needs, or it may be combined with other forms of treatment. ***Neoadjuvant chemotherapy*** refers to drugs given before surgery to shrink a tumor; ***adjuvant chemotherapy*** refers to drugs given after surgery to help prevent the **cancer** from recurring. **Chemotherapy also may be used (alone or along with other forms of treatment) to relieve symptoms of the disease.**

Chemotherapy is usually given in "cycles." A cycle includes a treatment period (one or more days when treatment is given) followed by a recovery period (several days or weeks), then the cycle repeats. Most anticancer drugs are given by intravenous injection (IV) into a vein; some are injected into a muscle or under the skin; and some are given by mouth. For some types of cancer, doctors are studying whether it helps to put anticancer drugs directly into the affected area.

Often, patients who need many doses of intravenous chemotherapy receive the drugs through a catheter (a thin, flexible tube) that stays in place until treatment is over. Usually a patient has chemotherapy as an outpatient (at the hospital, at the doctor's office, or at home). However, depending on which drugs are given, the dose, how they are given, and the patient's general health, a short hospital stay may be needed.

The side effects of chemotherapy depend mainly on the drugs and the doses the patient receives. As with other types of treatment, side effects vary from person to person. Generally, anticancer drugs affect cells that divide rapidly. In addition to cancer cells, these include blood cells, which fight infection, help the blood to clot, and carry oxygen to all parts of the body. When blood cells are affected, patients are more likely to get infections, may bruise or bleed easily, and may feel unusually weak and very tired. Rapidly dividing cells in hair roots and cells that line the digestive tract may also be affected.

As a result, side effects may include loss of hair, poor appetite, nausea and vomiting, diarrhea, or mouth and lip sores.

Biological Therapy (immunotherapy)

Helps the body's natural ability (immune system) to fight disease or protects the body from some of the side effects of cancer treatment. ***Monoclonal antibodies, interferon, interleukin-2*****, and** ***colony-stimulating factors*** are some types of biological therapies. The side effects caused by biological therapy vary with the specific treatment. In general, these treatments tend to cause flu-like symptoms, such as chills, fever, muscle aches, weakness, loss of appetite, nausea, vomiting, and diarrhea. Patients also may bleed or bruise easily, get a skin rash, or have swelling. These problems can be severe, but they go away after the treatment stops.

Radiation Therapy (radiotherapy)

The use of high-energy rays to kill cancer cells or stop them from growing and dividing. For some types of cancer, radiation might be used instead of surgery as the primary treatment. In other cases, radiation might be given after surgery to destroy any cancer cells that remain in the area. **There are two forms of radiation: external and internal.** External radiation comes from a machine outside the body. With internal radiation, radioactive material is sealed in a container (needles, wires, seeds, etc.) and placed directly in or near the tumor. **Radiation is a local treatment; it can only affect cancer cells in that area.**

The side effects of radiation depend on the amount of radiation given (the dose), the part of the body that is treated, and the individual patient's response. A common side effect is extreme tiredness and skin changes in the treated area. Most side effects will go away in time.

Hormone Therapy

Used against certain cancers that depend on hormones for their growth. Some types of cancer (such as most breast and prostate cancers) depend upon hormones (natural substances produced in the body) to grow. This treatment may involve using drugs that stop the production of hormones, or that change the way the hormones work in the body. Another type of hormone therapy is to remove organs (such

as the ovaries or testicles) that make the hormones. **Hormone therapy is a systemic treatment; it affects cancer cells throughout the body**.

Depending on which hormone is targeted, hormone therapy can cause a variety of side effects. Some of the side effects include feeling tired, fluid retention, weight gain, hot flashes, nausea and vomiting, and changes in appetite. Hormone therapy in women may lead to a loss or increase in fertility. Men may experience ***impotence*** or a loss of fertility. Patients may want to discuss these and other side effects with their doctor.

Clinical Trials

Research studies that evaluate promising new therapies and answer scientific questions. The purpose of these research studies is to find better ways to treat cancer and help cancer patients. They include studies of ways to prevent, detect, diagnose, and treat cancer; studies of the psychological effects of the disease; and studies of ways to improve comfort and quality of life.

Clinical trials offer important treatment options for many people with cancer and may be a part of a person's treatment plan for cancer. Patients who take part in clinical trials may have the first chance to benefit from new approaches. They also make contributions to knowledge and progress against cancer. As with any other treatment, there are risks involved with taking part in a clinical trial, but researchers are very careful to protect the patients who enroll in research studies.

Glossary of Terms

Adjuvant Chemotherapy Refers to drugs given after surgery to help prevent the cancer from recurring.

Anesthesia Loss of feeling or awareness. Local anesthetics cause a loss of feeling in a part of the body. General anesthetics put the person to sleep.

Biological Therapy Treatment to try to get the body to fight cancer. It uses materials made by the body or made in a laboratory to improve the body's natural response to disease.

Chemotherapy Treatment with drugs that kill the cancer cells.

Clinical trials Research studies that evaluate promising new therapies and answer scientific questions about ways to prevent, detect, diagnose, and treat cancer; the psychological effects of the disease; and ways to improve comfort and quality of life.

Colony-stimulating factors Substances that stimulate the production of blood cells.

Hormone Therapy Treatment of cancer by removing, blocking, or adding hormones.

Hormones Chemicals produced by glands in the body and circulated in the bloodstream. Hormones control the actions of certain cells or organs.

Impotence Inability to have an erection and/or ejaculate semen.

Interferon A type of biological treatment that interferes with the division of cancer cells and slows the growth of the tumor.

Interleukin-2 A type of biological treatment that stimulates the growth of certain disease-fighting blood cells in the immune system.

Local therapy Treatment that affects cells in the tumor and the area close to it.

Medical Oncologist A doctor who specializes in diagnosing and treating cancer using chemotherapy, hormone therapy and biologic therapy. A medical oncologist often serves as the person's main caretaker and coordinates treatment provided by the other specialists.

Monoclonal antibodies Substances produced in a laboratory that can locate cancer cells and bind to them wherever they are in the body. Monoclonal antibodies can be used alone or they can be used to deliver drugs, toxins, or radioactive material directly to the tumor.

Neoadjuvant Chemotherapy Refers to drugs given before surgery to shrink a tumor.

Radiation Oncologist A doctor who specializes in using radiation to treat cancer.

Radiation Therapy Treatment with high-energy radiation from x-rays, neutrons, and other sources to kill cancer cells and shrink tumors.

Side effects Problems that occur when treatment affects healthy cells. Common side effects of cancer treatment are fatigue, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores.

Surgeon A doctor who specializes in surgery - removing or repairing a part of the body.

Surgery Treatment to remove or repair a part of the body.

Systemic Treatment Treatment that uses substances that travel through the bloodstream, reaching and affecting cells all over the body.

For more detailed information about the glossary terms, please refer to the Dictionary on www.cancer.gov OR call the Cancer Information Service at 1-800-4-CANCER (1-800-422-6237)

References

Burhansstipanov, L. (1997). Cancer among elder Native Americans. Native Elder Health Care Resource Center.

Kim, C. & Kwok, Y. S. (1998). Navajo use of native healers. Archives of Internal Medicine, 158(20), 2245-2249.

Kleinsmith, L. J., Kerrigan, D., Spangler, S. (2001). Understanding cancer. [CD-ROM]. National Cancer Institute.

National Cancer Institute (2000). What you need to know about cancer. (NIH Publication No. 00-1566).

Please Note—

✓ Use the Curriculum/Training Evaluation located in the Evaluation section, to get valuable participant feedback.

✓ The Health Change Checklist, located in the Evaluation section, directs the participants new attitudes towards new actions and may be used as a take home exercise.

✓ Please Complete the "Trainer Activity Report" in the Evaluation section of the curriculum. Your feedback allows us to track usage of the curriculum for reporting purposes and ensures you receive any updates to the material.

We look forward to hearing from you. Thank You.