Glossary of Terms

Abscopal effect – A hypothesis in the treatment of metastatic cancer whereby shrinkage of untreated tumors occurs concurrently with shrinkage of tumors within the scope of the localized treatment.

Axillary lymph node dissection (ALND) – A surgery to remove lymph nodes from the underarm (armpit or axilla). Also called axillary dissection, axillary node dissection or axillary lymphadenectomy.

Brachytherapy – A radiation therapy treatment that involves the placement of radioactive sources in or just next to a tumor or tissue. Two main forms of brachytherapy are intracavitary treatment and interstitial treatment. With intracavitary treatment, the radioactive sources are put into a space near where the tumor is located, such as the cervix, the vagina or the windpipe. With interstitial treatment, the radioactive sources are put directly into the tissues, such as the prostate.

Clinical Trial – A research study conducted to test methods of screening, prevention, diagnosis or treatment of cancer. Clinical trials try to determine if a new approach is safe and potentially effective, often comparing more commonly used treatments with a new treatment that researchers think might be better. See Phase I, II, III, IV for further details.

DNA – The molecules inside cells that carry genetic information. Also known as deoxyribonucleic acid.

De-escalation – In cancer treatment, the reduction of exposure to treatment therapy and its negative effects. Treatment de-escalation is usually considered as a way to improve quality of life for the patient.

Distant recurrence – Cancer that comes back but in different areas of the body.

FASTRO – Fellow of the American Society for Radiation Oncology. This designation is awarded to members of ASTRO based on service to ASTRO and contributions to the field of radiation oncology.

Gy (gray) – A measure of radiation dose by how much radiation is absorbed by the tissues.

Hippocampus – A part of the brain structure located in the temporal lobe. This section of the brain is part of the system responsible for emotion, learning and memory.

Hormone-suppression therapy – Slows or stops the growth of hormone-sensitive tumors by blocking the body's ability to produce hormones or interfering with the effects of hormones on cancer cells.

Hypofractionation – Delivering the optimal amount of radiation over fewer sessions.

Immune system – Protects the body against disease; identifies and attacks foreign bodies including viruses, bacteria or parasites.

Immunotherapy – A treatment that uses the patient's own immune system to help fight the cancer. Treatment will either stimulate the immune system to attack cancer cells or provide the immune system with what it needs, such as antibodies, to fight the cancer cells.

Intensity-modulated radiation therapy (IMRT) – A technique that adjusts the radiation beam to the shape of a tumor, allowing for higher, more effective doses of radiation to be delivered while minimizing exposure to surrounding healthy tissue.

Lumpectomy – A surgery in which only the tumor and some surrounding tissue is removed from the breast. It is also known as breast-conserving surgery.

Lymph nodes – Small glands that filter a clear fluid called lymph through the lymphatic system.

Lymphedema – A long-term condition where excess fluid (lymph) collects in tissues causing swelling.

Lymphatic system – Part of the immune system, the lymphatic system is a network of tissues and organs that help rid the body of toxins, waste and other unwanted materials. The primary function of the lymphatic system is to transport lymph, a fluid containing infection-fighting white blood cells, throughout the body.

Lymphoma – A tumor found in the lymphatic system. The two main types of lymphomas are Hodgkin's and non-Hodgkin's lymphomas.

Mastectomy – Breast cancer surgery that removes the entire breast.

Metastases (Metastasis) – The spread of cancer from one part of the body to another.

Neuroblastoma – A cancerous tumor that begins in nerve tissue of infants and very young children, often younger than five years of age.

Oligometastatic – A type of metastasis in which cancer cells from the original tumor travel through the body and form a small number of new tumors in one or two other parts of the body.

Overall Survival (OS) – The length of time from either the date of diagnosis or the start of treatment that patients diagnosed with the disease are still alive. In a clinical trial, measuring the overall survival is one way to see how well a new treatment works.

Palliative – A type of care, also known as supportive care. The goal of this care is to improve the quality of life of cancer patients by relieving distressing symptoms such as pain, shortness of breath, loss of appetite, problems sleeping, fatigue and many more. Many cancer patients undergo palliative care while maintaining their other cancer treatments.

Perometry – A non-invasive technique that uses infrared light to measure limb circumference and volume of fluid and is more accurate than a simple limb circumference measurement. The measurement tool is called a perometer.

Phase I, II, III, IV – Clinical trials are broken down into four phases of study.

- **Phase I** often looks at combining radiation therapy with other treatments such as surgery or drugs to evaluate new ways to deliver radiation therapy.
- **Phase II** tries to establish if the new treatment determined in Phase I is effective in controlling the tumor.
- **Phase III** compares the new treatment against the current standard treatment. Patients are randomly assigned to one of two groups; one group receives the standard treatment, the other receives the new treatment and results are compared. If the new treatment results are better than standard treatment, researchers will reconsider the standard of care treatment.
- **Phase IV** is the final step in the process and tests to make sure the new treatment is safe and effective over a long period of time.

Progression-free survival (PFS) – The length of time during and after treatment that a patient lives with cancer, but the cancer does not get worse. In a clinical trial, measuring the progression-free survival is one way to see how well a new treatment works.

Proton beam radiation therapy – A type of radiation therapy that uses protons (tiny particles with a positive charge) to kill tumor cells. This type of treatment can reduce the amount of radiation damage to healthy tissue near a tumor by targeting the cancer cells more precisely.

Randomized study – A study in which the participants (patients) are divided at random into separate groups to compare different treatments.

Regional lymph node radiation (RLNR) – Radiation treatment to nearby lymph nodes, which is commonly used after mastectomy in women with node-positive breast cancer. Also termed regional nodal irradiation (see below).

Regional nodal irradiation (RNI) – Radiation treatment to nearby lymph nodes, which is commonly used after mastectomy in women with node-positive breast cancer. Also termed regional lymph node radiation (see above).

Sentinel lymph node biopsy (SLNB) – A biopsy that does minimal sampling of lymph nodes most likely to be involved with cancer.

Simulation (radiation simulation) – In cancer treatment, a process used to plan radiation therapy so that the target area is precisely located and marked.

Stage 1, 2, 3 cancers – The extent of a cancer in the body. Staging is usually based on the size of the tumor, whether lymph nodes contain cancer, and whether the cancer has spread from the original site to other parts of the body.

Stereotactic ablative radiotherapy (SABR) – A treatment that delivers one to five stereotactic radiation treatments to tumors within the body, excluding brain or spine. Also known as stereotactic body radiation therapy (SBRT).

Stereotactic body radiation therapy (SBRT) – A type of external radiation therapy that uses special equipment to position a patient and precisely deliver radiation to tumors in the body. The total dose of radiation is divided into smaller doses given over several days. Also called SABR, (see above).

Stereotactic radiosurgery (SRS) – A treatment that delivers one to five stereotactic radiation treatments to the brain or spine. This treatment does not involved surgery, an incision is not made, and tissue is not surgically removed.

Toxicity – The degree to which something is harmful to a patient.