

Side Effects of Radiation Treatment to Head and Neck

***NOTE OF EXPLANATION FROM THE AUTHOR:**

Patients should keep in mind that applying radiation treatment is a complex issue with many variables. It is difficult to predict any and all possible side effects and their relative severity with any given patient. Physicians and oncologists are faced with many difficult decisions in weighing the benefits against the potential side effects for treating cancer. A list of some of the possible side effects is provided below, though no patient will experience all of these and some patients may experience other side effects not listed. This list primarily addresses radiation treatment to the head and neck which is the most common treatment for ACC, though treatment to other areas of the body can result in similar or different types of side effects. Patients should discuss these issues in detail with their physician prior to treatment so that the patient and their doctor can anticipate and prepare for choosing the best possible palliative treatments.

What are the Possible Side Effects of Radiation Treatment?

A majority of patients have side effects that occur during treatment and then over the first year dissipate to a point that they return to a normal existence. Some have certain effects that are permanent. It is also possible to have delayed effects show up several years later. Ignoring the possible side effects is one way of approaching treatment, but being informed of all the possibilities can help a person better manage those effects if and when they occur. It is very common to have a radiation oncology nurse or ENT as part of the treatment team who are well versed in the wide variety of palliative treatments such as lotions, washes, procedures, nutrition, exercises and drugs. Through discussions with your treatment team and networking with other patients it is possible to find out what aids are available to help reduce the severity and intensity for most side effects.

* See the additional link for “Palliative Treatments” for a list of possible drugs and treatments that can help with side effects.

There is a wide range of effects that a patient may experience based upon the type of radiation, the treatment field (area of the body that is treated), location of tumor, total dosage, proximity to critical organs, individual resilience, general health and mental attitude. Also, if a primary tumor has been removed with surgery there can be additional side effects because of the cumulative damage to tissue and critical structures. Some side effects occur during treatment and then dissipate over time, some occur during treatment and then continue for years, and some occur post-treatment even waiting up to several years to take effect.

Side effects can be classified and sorted several different ways:

- Common vs. rare
- Acute vs. late (chronic)
- Mild vs. severe
- Temporary vs. permanent.

Common: A large percentage of patients treated with an equivalent radiation dosage to the same treatment field will experience this type of side effect.

Rare: A small percentage of patients experience this type of side effect.

Acute: An acute side effect has an abrupt onset of symptoms, a short course and it occurs during or within 90 days of treatment. An acute side effect is always temporary.

Late/chronic: A late effect is a condition that persists or occurs more than 90 days after treatment. A late effect can be temporary or permanent.

Temporary: An effect that ends within 90 days of treatment.

Permanent: An effect that remains for the remainder of a patient's life.

The radiation patient may experience some or none of the following:

Systemic Effects

Common

Fatigue - acute

Nausea - acute

Loss of appetite - acute

Weight loss - acute

Side effects of prescribed drugs to combat other effects - acute

Rare

Low white cells in blood

Mouth and Throat Effects

Common

Dental concerns, teeth and gum problems that require specialized care - acute

Loss or major changes to sense of taste and/or smell – acute/late/chronic

Increased sensitivity to spicy, hot or cold food – acute/late/chronic

Inability to use standard “mint” toothpaste or mouth washes because they “burn” - acute

Inability to consume any solid food – liquids only - acute

Dry mouth - loss of saliva partially or almost totally – acute/late/chronic

Increase thirst requiring you to have water with you 24 hours a day - acute

Difficulty swallowing - acute

Sore throat - acute

Mouth sores - acute

Rare

Vocal cord damage – late/chronic

Stiff jaw muscles that won't open as wide – acute/late/chronic

Mucus buildup and mucus drainage complications – acute/late/chronic

Skin and Tissue Effects

Common

Discolored or red skin similar to sunburn - acute

Peeling skin - acute

Drooping, scaling, dry skin – acute/late/chronic

Rare

Muscle atrophy and weakened strength in radiated area – late/chronic

Fluid retention, inflammation, swelling in glands, tissue and lymph nodes - acute
Hair loss or thinning – late/chronic
Hyperpigmentation – darkening of the skin – late/chronic
Skin and bone lesions that are difficult to heal such as Osteoradionecrosis – late/chronic

Nerve and Brain Effects

(Generally, radiation is not damaging to major nerves such as the trigeminal/facial nerve, but can be damaging to some nerves such as the optic nerve and base of skull which is why treatment planning is so critical near these critical organs and tissues.)

Common

Headache – acute
Brain swelling causing nausea - acute

Rare

Brain seizures resulting in amnesia – late/chronic
Neurological malfunctions such as trigeminal neuralgia – late/chronic
Muscle spasms – late/chronic
Numb areas and loss of feeling – late/chronic
“Phantom” sensations – late/chronic

Ear Effects

Common

Pain in ears – late/chronic
Earwax or dead skin tissue build up on ear drum or in canal – late/chronic
Poor drainage of fluids with hearing blockage – late/chronic
Recurrent ear infections – late/chronic
Equilibrium and balance problems caused by inner ear damage – late/chronic
Ringing, buzzing sound in head and ears (tinnitus) – late/chronic

Rare

Complications with eardrum – late/chronic
Partial or total hearing loss – late/chronic
Damage to the inner ear (vestibular damage) – late/chronic

Common Psychological and Social Effects

(All cancer patients can have a wide range of emotional issues to deal with, and though these effects are not directly related to radiation treatment, it is important to keep these issues in the fore front because they are extremely important to quality of life issues.)

Emotional roller coaster of feeling really positive and then very depressed
Fear
Depression
Reduced sexual drive
Feeling alone
(Bitchy, irritated, angry, frustrated... pissed off!)