

# IV Vitamin C for Cancer

## Riordan Clinic Best Practice



The pharmacologic doses of vitamin C (ascorbic acid) have shown significant anticancer effects in animal models and tissue culture investigations including cytotoxic effects in certain cancer cell lines. **Clinical studies have shown that intravenous and oral doses of vitamin C may improve symptoms and prolong survival in terminal cancer patients.**

Intravenous vitamin C (IVC) is a adjunctive cancer therapy, widely used in naturopathic and integrative oncology settings. During this treatment, ascorbic acid enters your body through a small tube inserted into a vein in your arm or through a port. There are several potential benefits to giving IVC to cancer patients that make it an ideal adjunctive care choice:

- Cancer patients are often depleted of vitamin C, and IVC provides an efficient means of restoring tissue reserves.
- IVC has been shown to improve quality of life in cancer patients by a variety of metrics.
- IVC reduces inflammation (as measured by C-reactive protein levels) and reduces the production of pro-inflammatory cytokines.
- At high concentrations, ascorbate is preferentially toxic to tumor cells but not normal cells and is the tumor blood vessels' formation inhibitor.

## Here is some information to consider before choosing Intravenous Vitamin C.

- 1** Though the literature and clinical studies do suggest IVC has a good safety profile and potentially important anti-tumor activity as an adjunctive therapy in the treatment of cancer, it is not considered a “stand alone” therapy. It is one component of multi-faceted comprehensive care that must include dietary, nutritional, and lifestyle changes that support wellness.
- 2** IVC can be used with traditional cancer treatments such as surgery, chemotherapy, and radiation.
- 3** IVC is conditional on lab work that allows for initial and ongoing IVC. Adequate G6PD levels, renal, liver, and bone marrow function are required. Baseline imaging should be completed before starting IVC. We require ongoing active monitoring by an oncologist concurrent with IVC therapy.
- 4** The decision that a patient is appropriate to start IVC is made by Riordan medical providers after review of their lab results and review of the patient health history.
- 5** Treatment is to be continuous with infusions of IVC two to three times per week. Continuous and more frequent treatments with IVC, without lapses in treatment, are shown by our studies, to increase effectiveness of the IVC in suppression of tumor growth.
- 6** Infusion time requirements and financial requirements need to be carefully assessed prior to beginning treatment to assess whether you are able to continue with treatment in order to benefit from treatment.
- 7** IVC is typically continued until there is an improvement of patient conditions (stabilization of patient tumor or no detection of cancer for a 12 month period of time). At that point treatments are tapered, with decreasing frequency of IVC treatments. Infusions are continued until the decision is made by the patient and provider that IVC is no longer indicated.

The research articles related to IVC and cancer which may be helpful to read and to share with your medical support team can be found on our website [www.riordanclinic.org](http://www.riordanclinic.org).

Watch a video on IVC and Cancer Care, created by the Riordan Clinic and our chief medical officer, Dr. Ron Hunninghake: [https://youtu.be/u90\\_Lh8yWZs](https://youtu.be/u90_Lh8yWZs)

