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# Oncology Pharmacy Newsletter

**The Oncology Pharmacy Newsletter** is publication dedicated to providing useful information for the staff treating patients who come to the Oncology Outpatient Pavilion.

We welcome questions and requests for topics.

References available upon request.

## Influenza Vaccine 2016-17

This season's influenza vaccine is Fluzone® Quadravalent. It is supplied as 60mcg/0.5ml prefilled syringes. It is inactivated virus and provides immunization against influenza A and B.

Fluzone® should be administered IM in the deltoid muscle.

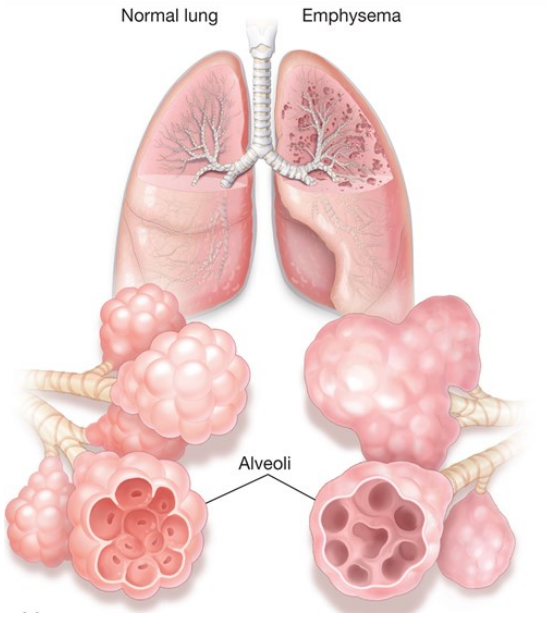
Fluzone® is contraindicated in those with history of anaphylaxis or other severe allergies to egg protein or previous flu vaccines.

Most common adverse reactions are injection site pain, headaches, myalgia, and malaise.

All Oncology patients and their household contacts should receive inactivated influenza virus vaccine this season.

## *Aralast NP® – alpha$_1$-proteinase inhibitor (human)*

*Christopher Jensen, 2017 PharmD Candidate*




Aralast NP® is an alpha$_1$-proteinase inhibitor indicated for chronic augmentation therapy in adults with emphysema caused by severe congenital alpha$_1$-proteinase inhibitor deficiency, also known as alpha$_1$-antitrypsin (AAT) deficiency. AAT deficiency is an inherited genetic disorder characterized by low levels of AAT in the blood. AAT is a protein which protects the lungs and liver from damage. A deficiency in AAT allows for certain enzymes to attack healthy lung and liver tissues leading to emphysema and chronic liver disease. Neutrophil elastase is one of these enzymes present in the lungs, and with low levels of AAT, it degrades the alveolar walls. Aralast NP® works by inhibiting serine protease enzymes including neutrophil elastase. Not all patients with AAT have a severe form of the disease, and not all patients have emphysema. Aralast NP® is only indicated in patients with severe AAT deficiency with clinically evident emphysema.

Aralast NP®, which was first approved by the FDA under the brand name Aralast® in 2002, is derived from human plasma. Aralast NP® is a newer, modified form of Aralast® with a slightly different protein structure containing less C-terminal lysine. It is available as a dry powder in single dose vials containing 500mg or 1000mg of drug. There are other alpha$_1$-proteinase inhibitor products available under different brand names including Glassia®, Prolastin-C®, and Zemaira®.

Aralast NP® must be reconstituted by Pharmacy with the provided sterile water using the transfer device and filter included with the product. It's important not to shake the vial during reconstitution and administer the drug within three hours. Before administering the drug, check the appearance for discoloration or particles. The reconstituted product is colorless or has a slight yellow to yellow-green color. Since more than one vial will likely be needed for each patient dose, multiple vials may be pooled into an empty, sterile IV solution container using the included filter. The final product does not need to be filtered upon administration.

The recommended Aralast NP® dosage is 60 mg/kg body weight administered once weekly by IV infusion at a rate not to exceed 0.2 mL/kg body weight per minute. In addition, Aralast NP® should be administered alone, without mixing with other agents or diluting solutions.

One warning to note with Aralast NP® is the risk of hypersensitivity reactions which have occurred following administration of the drug. This is thought to be caused by trace amounts of immunoglobulin A (IgA) within Aralast NP®. Patients with IgA deficiency with antibodies against IgA have a greater risk of severe hypersensitivity and anaphylactic reactions; therefore, Aralast NP® is contraindicated in these patients. If anaphylaxis occurs, discontinue the infusion immediately. Monitor patients carefully during infusions and have epinephrine and other emergency care available in case of a reaction.

In clinical studies, the most common adverse events included headache, musculoskeletal discomfort, vessel puncture site bruise, nausea, and rhinorrhea. Other post-marketing adverse events that have been reported include: flushing, chest pain, vomiting, diarrhea, urticaria, and fatigue. Reduce the infusion rate or stop the infusion if adverse reactions occur, and resume at a rate tolerated by the patient after symptoms subside.

Because Aralast NP® is made from human plasma, it may carry the risk of transmitting infectious agents; however, the manufacturing process is designed to minimize risk of viral transmission. Aralast NP® has not been studied in pregnant or nursing mothers and its safety and efficacy has not been established in pediatric patients or in patients over age 65.

While treatment with Aralast NP® has been shown to maintain target serum AAT levels in the body, the drug's effect on pulmonary exacerbations and progression of emphysema has not been demonstrated in randomized controlled clinical trials.

Aranesp NP® will be infused in the Adult Ambulatory Care Unit in the near future.

## *Questions or comments?*

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