Atlantic Guidelines for the use of IVIG in Solid Organ Transplant

1. When transplantation will involve use of a kidney from a living donor to whom the patient is sensitized, IVIG is recommended to decrease donor specific sensitization.

For patients who are sensitized as defined by a significant donor specific antibody, give IVIG 0.5 to 2 g/kg per month for 4 months. The alternate strategies such as plasmapheresis followed by IVIG (100 mg/kg) are considered acceptable strategies. The use of plasmapheresis followed by IVIG (100 mg/kg per dose) is generally restricted to the perioperative period.

Although the data is not derived from the pediatric population, it is reasonable to use IVIG similarly in the pediatric population.

2. IVIG is not recommended pre transplant for patients who do not have donor-specific antibodies.

3. Give IVIG with plasmapheresis for patients who have received a living donor or deceased donor kidney transplant and who have acute antibody mediated rejection to improve graft survival.

IVIG is commonly administered as part of a treatment protocol that includes plasmapheresis. Regimens for administration of IVIG include IVIG after each plasmapheresis treatment (100 mg/kg per treatment day) or as a set dose of 2 g/kg total, alone or if given with plasmapheresis after the final plasmapheresis treatment. There are no comparative data to indicate which of these approaches is superior.

4. In patients who have received a living/deceased donor kidney transplant and who have steroid resistant rejection, consider IVIG to improve graft survival when other therapies are deemed unacceptable or ineffective.

   Adjunctive therapy for viral infections like Cytomegalovirus, Polyoma BK virus, Parvovirus and Epstein Barr virus should be considered.

IVIG can be administered over a period of up to 10 consecutive days, to a total dose of 2 g/kg. Longer administration periods with smaller doses can be used in selected in patients where fluid overload is a potential risk. Assessment of treatment response should include measurement of renal function and reassessment of renal histology.

5. There is insufficient evidence to make a recommendation for or against the routine use of IVIG for other forms of rejection in kidney transplants.

6. There is insufficient evidence to recommend for or against the routine use of IVIG for desensitization for patients undergoing heart/lung/liver transplantation to
improve graft/overall survival or to treat rejection; however, other factors may influence decision-making.

NOTE: Use of IVIG with lowest osmolality should be considered to prevent the deterioration of renal function.

The mean Osmolalities of available IVIG products are listed below:

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<td>Osmolality (in mOsmol/kg) physiological osmolality is approx. 285-295.</td>
<td>636</td>
<td>1250</td>
<td>258</td>
<td>320</td>
<td>445</td>
<td>240-300</td>
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