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| **PROTOCOL TITLE:** Kidney and Pancreas Post Transplant: Leukopenia Management | |
| **APPLICABLE FACILITIES:**  EHC EDH EHH EHI EHN EJCH ELTAC ESJH  EUH EUHM EUHS EUOSH EWWH RJV-ERH RJV-ESOP TEC/ESA | |
| **EFFECTIVE DATE:** | **ORIGINATION DATE:** 05/21/2008 |

**CATEGORY:**  Diagnostic/Therapeutic/Preventive Medication Guidelines

**LEVEL:** Independent

**SCOPE:** All transplant program physicians, practitioners and clinical staff members are responsible for compliance with this clinical protocol.

**PURPOSE:** The purpose of the protocol is to provide guidelines for the management of leukopenia post kidney/pancreas transplantation.

Leukopenia is a common occurrence after renal transplantation and in many cases results from immunosuppressive medications and/or viral infections. The underlying etiology of the leukopenia post-transplantation can include:

1. **Immunosuppressive agents:** mycophenolate mofetil (MMF or Cellcept), mycophenolic acid (MPA or Myfortic), azathioprine, sirolimus, thymoglobulin
2. **Anti-infective agents**: valganciclovir, ganciclovir, trimethoprim-sulfamethoxazole, penicillins
3. **Infections**: CMV or any viral infection
4. **Hypersplenism**: especially in liver-kidney transplant recipients

**TARGET PATIENT POPULATIONS:**

Post kidney/pancreas transplant recipients

**PROTOCOL:**

1. Evaluate concomitant medications, especially thymoglobulin, valganciclovir, mycophenolate, sirolimus, or azathioprine.
2. For all WBC <3,000, check differential
3. Rule out CMV viremia via plasma PCR by quantification
4. If patient is on valganciclovir: **Do Not Hold** valganciclovir or reduce dose for leukopenia
5. For ANC between 500 to 1000:
6. Consider mycophenolate dose reduction by 25%
7. Repeat CBC with differential Q 2 weeks
8. For ANC < 500:
9. Reduce mycophenolate by 25 to 50%
10. Administer filgrastim or biosimilar agent; consider dosing as below or per prescribing provider discretion:

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| Weight < 78kg | Dose 300mcg |
| Weight > 78 kg | Dose 480 mcg |

1. Repeat CBC with differential in 1 week and as clinically indicated there after
2. If new onset ANC < 500 and patient febrile (>38 C), consider admission for further evaluation
3. Reintroduce and/or increase mycophenolate dose when leukopenia is corrected
4. Individualize care for refractory leukopenia

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**RELATED POLICIES / PROCEDURES:**

Kidney and Pancreas Post-Transplant Management Care

**DEFINITIONS:** N/A

**REFERENCES AND SOURCES OF EVIDENCE:**

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**KEY WORDS:** Leukopenia