DNA/Chimerism Analysis using STRs, Pre-Transplant samples and initial post

**CPT Code(s):** 81265, 81267

**Service Code (IU Health):** 53025615, 53024279

**Ordering Recommendation:** Chimerism Analysis using STR’s is performed to monitor engraftment of donor cells to assess graft success after born marrow transplantation. It is recommended for monitoring the donor/recipient origin of white blood cells in peripheral blood, marrow, and/or T-cells; differentiate donor cell populations if a patient receives multiple transplants; evaluate the risks of recurrence of disease; or provide supporting diagnosis of graft-versus-host disease (GVHD).

**Synonyms:** Bone marrow transplantation, STR analysis, STR genotyping, chimerism analysis, bone marrow engraftment analysis, graft-versus-host disease

**Methodology:** PCR followed by capillary electrophoresis using 15 autosomal short tandem repeat (STR) markers and one gender marker (amelogenin).

**Performed:** Mon-Fri

**Reported:** 6-9 days

**Specimen Requirements**

**Patient Preparation:** None required for whole blood or DNA

**Collect:** Blood: Lavender (EDTA) tubes; DNA: Screw cap tube, buccal swab.

**Specimen Volume:** Blood: 2-6 mL whole blood; DNA: at least 0.55ug of genomic DNA at a concentration of at least 20 ng/ul; buccal swab (Lab provides collection tube)

**Storage/Transport:** Refrigerated/Room temperature

**Unacceptable Conditions:** Grossly hemolyzed or clotted

**Remarks:**
Department of Medical and Molecular Genetics
Division of Diagnostic Genomics

**Stability:** 2 weeks refrigerated; 1 month frozen

**Reference Interval:** by report

**Interpretive Data**

Interpretation covers: the numbers of informative markers identified for the donor/recipient pair; the range/mean of percentage of recipient and donor cells in the patients.

**Analytical sensitivity and specificity:** 99%

**Limitations:** Due to limitation of the current technology, low level (<5%) mixture/mosaicism may not be detected. Although rare, false positive or false negative results may occur. All results should be interpreted in context of clinical findings, relevant history, and other laboratory data.

**References:**