10 Steps to Understanding the Black Swan Research Initiative®

The goal of the IMF’s Black Swan Research Initiative is to identify and implement multiple curative strategies for multiple myeloma. Today, more than 30 Black Swan-supported investigative teams around the world are actively engaged in myeloma research. In just a few short years since its launch in 2012, the IMF’s signature research project is already yielding results. This page will be updated regularly as we move research forward. Click HERE to receive update alerts.

**Step 1. Diagnose early**
- New Diagnostic Criteria published
- iStopMM program launched in October 2016 to better identify criteria for progression
- Additional projects in development

**Step 2. Monitor disease at low levels**
- Next Generation Flow (NGF) method developed and published
- Blood DNA mutational analysis method developed and published
- Additional projects in development

**Step 3. Create a consensus**
- Response criteria incorporating minimal residual disease (MRD) published
- Myeloma MRD consortium launched in October 2016
- Review meeting set with FDA for March 14, 2017

**Step 4. Develop a blood test**
- NGF bone marrow method found to readily detect myeloma cells in the blood
- Serial testing to evaluate NGF blood test underway in multiple trials, including the iStopMM program
- DNA mutational analysis blood screening also being evaluated in trial setting

**Step 5. Confirm value of MRD-negative status**
- Large databases with patient-level data gathered for submission to the FDA

**Step 6. Start to cure early disease**
- 3 “CURE trials” in progress
  - CESAR (Spain): started in 2006
  - ASCENT (US): starting 2017, 1st quarter
  - iStopMM (Iceland): starting 2017, 2nd quarter

**Step 7. Study and treat MRD-positive patients**
- Many studies underway
- Many trials for MRD positive patients in progress

**Step 8. Study long-term survivors and MRD status**
- Large study ongoing using Next Generation Sequencing (NGS) to test archived samples of patients at 5, 10, 20 years and beyond
- Clinical Predictors of Long-Term Survival in Newly Diagnosed Transplant Eligible Multiple Myeloma – an IMWG Research Project (pending publication, 2017)

**Step 9. Develop guidelines to cure all myeloma patients**

- Trials in high-risk smoldering multiple myeloma (HRSMM) have started this process

**Step 10. Develop guidelines to prevent MGUS/SMM/MM**

- Epidemiology studies in iStopMM and elsewhere are establishing the datasets for this initiative