# mSMART 3.0: Classification of Active MM

## High-Risk

- High Risk genetic Abnormalities [a,b]

    - t(4;14)
    - t(14;16)
    - t(14;20)
    - Del 17p
    - p53 mutation
    - Gain 1q

- RISS Stage 3
- High Plasma Cell S-phase[c]
- GEP: High risk signature

- Double Hit Myeloma: Any 2 high risk genetic abnormalities

- Triple Hit Myeloma: 3 or more high risk genetic abnormalities

## Standard-Risk[a]

All others including:
- Trisomies
- t(11;14)[d]
- t(6;14)

[a] Trisomies may ameliorate
[b] By FISH or equivalent method
[c] Cut-offs vary
[d] t(11;14) may be associated with plasma cell leukemia

Dispenzieri et al. Mayo Clin Proc 2007;82:323-341; Kumar et al. Mayo Clin Proc 2009 84:1095-1110; Mikhael et al. Mayo Clin Proc 2013;88:360-376.   //last reviewed Feb 2023