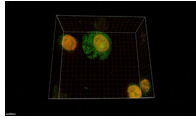
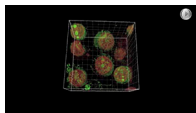


## SUPPLEMENTAL MATERIAL

Viny et al., <http://www.jem.org/cgi/content/full/jem.20151317/DC1>

**Video 1. *Smc3<sup>fl/+</sup>* BM nucleolar 3D reconstruction.** Nucleolar stain of *Smc3<sup>fl/+</sup>* BM reveals a solitary intranuclear nucleolus. ACK-lysed BM was stained with TOTAL-NUCLEAR-ID fluorescent reagents, allowing simultaneous staining of both the nucleoli (green) and total nucleus (red). Images were taken using a TCS SP5 confocal microscope (Leica) with a 63× 1.4 NA oil objective and deconvolved using AutoDeblur (Media Cybernetics). Three-dimensional rendering was performed using Imaris.



**Video 2. *Smc3<sup>Δ/+</sup> Flt3-ITD* BM nucleolar 3D reconstruction.** Nucleolar stain of Mx1-Cre *Smc3<sup>Δ/+</sup> Flt3<sup>ITD</sup>* BM reveals fragmented and supernumerary nucleoli. ACK-lysed BM was stained with TOTAL-NUCLEAR-ID fluorescent reagents, allowing simultaneous staining of both the nucleoli (green) and total nucleus (red). Images were taken using a TCS SP5 confocal microscope (Leica) with a 63× 1.4 NA oil objective and deconvolved using AutoDeblur (Media Cybernetics). Three-dimensional rendering was performed using Imaris.

Table S1, included as a separate Excel file, shows the *Smc3<sup>Δ/+</sup>* stable and unstable gene list.