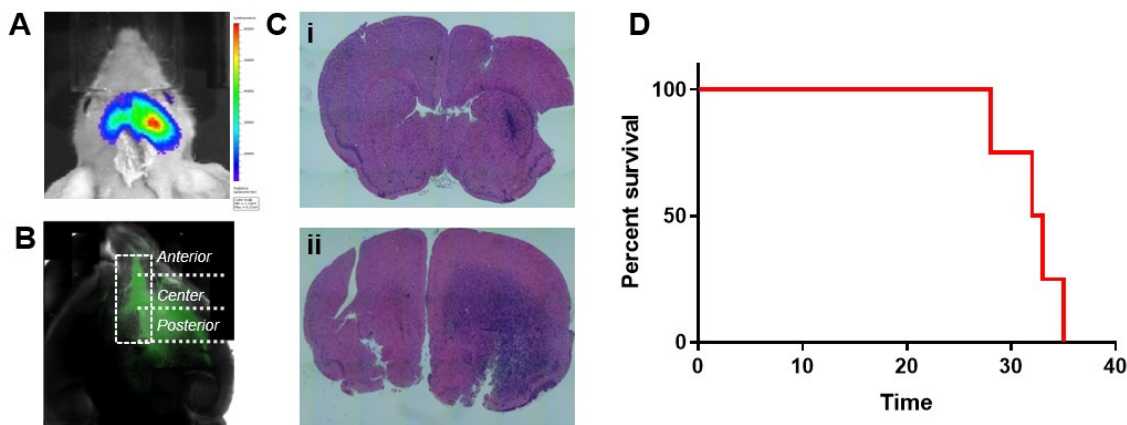
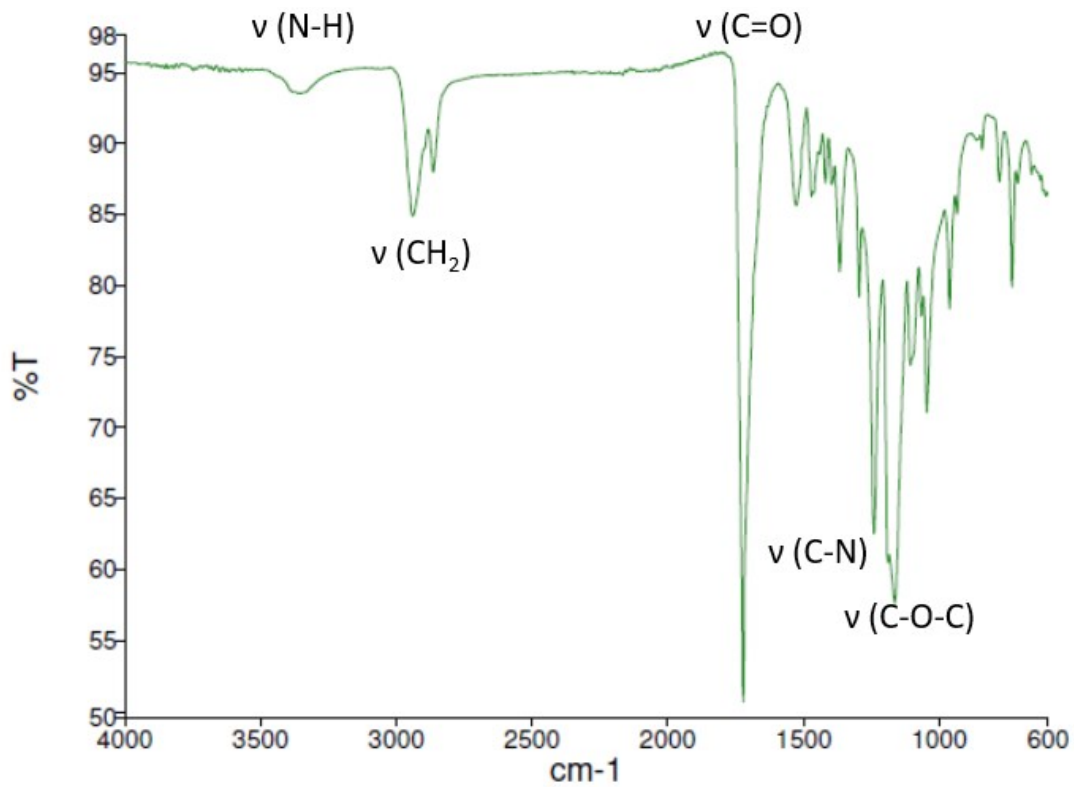


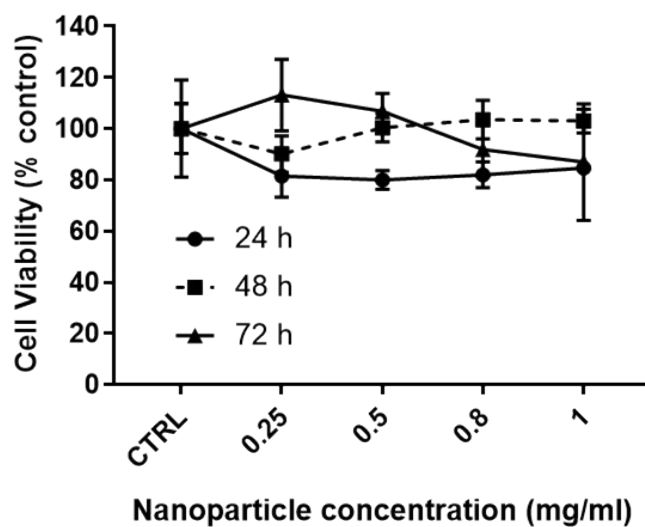
## SUPPLEMENTARY INFORMATION



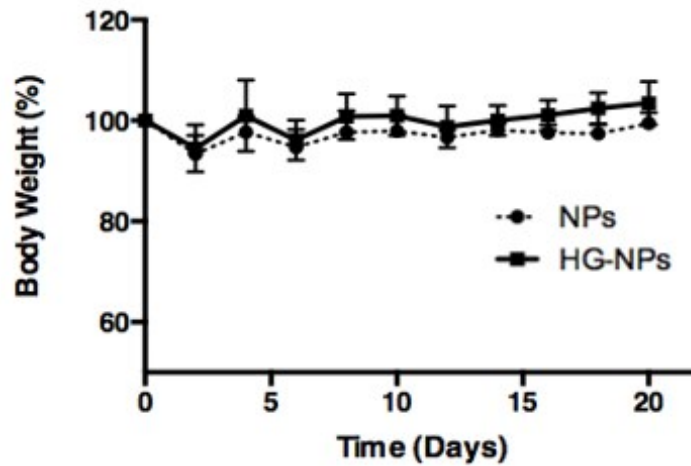
**Supplementary figure 1.** Characterization of the human-derived orthotopic GBM model. A) Bioluminescence from tumor at 18 days post inoculation in athymic nude mice. B) Stitched image from wide-field confocal analysis of terminal tumor (green fluorescence). This figure indicates the regions identified as tumor center and tumor peripheries, anterior and posterior to the injection site, used to determine tumor coverage in NPs and HG-NPs groups. C) H&E staining of a coronal section showing an early-stage (i) and a late-stage tumor (ii). D) Survival curve of untreated (e.g. PBS-injected mice), n=4.



**Supplementary figure 2.** FTIR Analysis of the polyurethane used for NP preparation

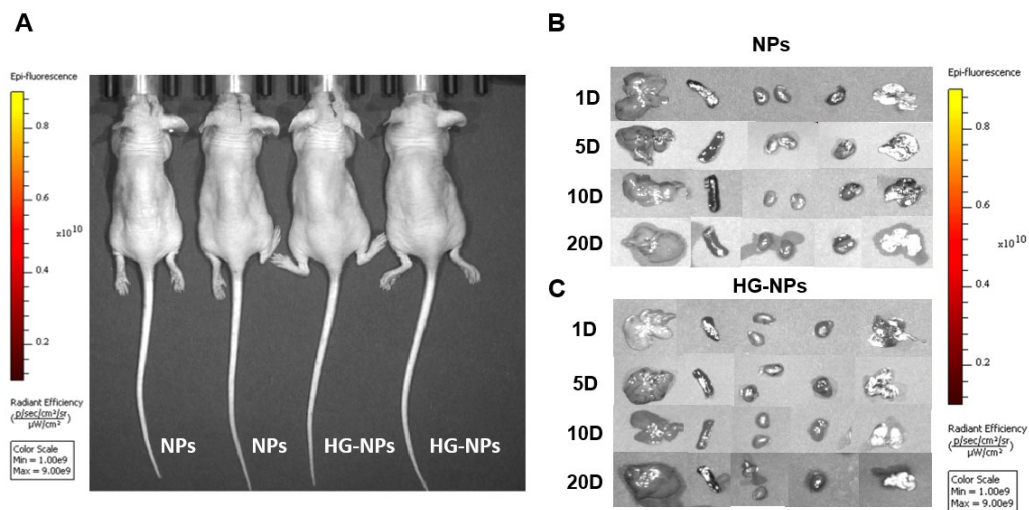


**Supplementary figure 3.** Evaluation of empty NP toxicity in GBM-8 cells by MTS assay (n = 4).



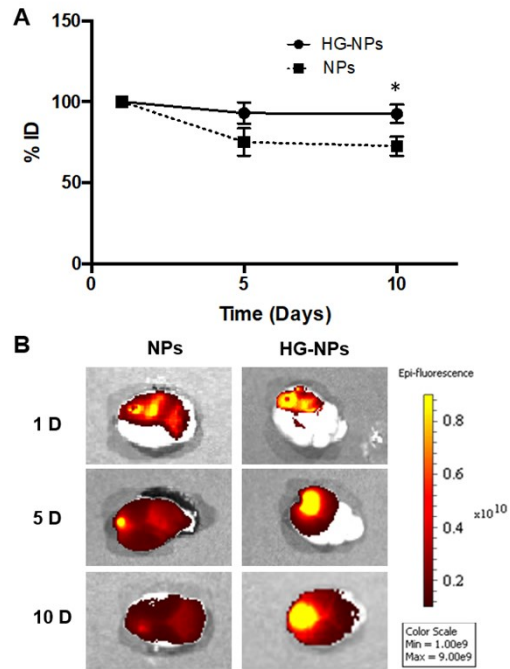
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**Supplementary figure 4.** Analysis of treatment toxicity. Body weight monitoring of mice injected with NPs and HG-NPs, expressed as % of the initial weight.

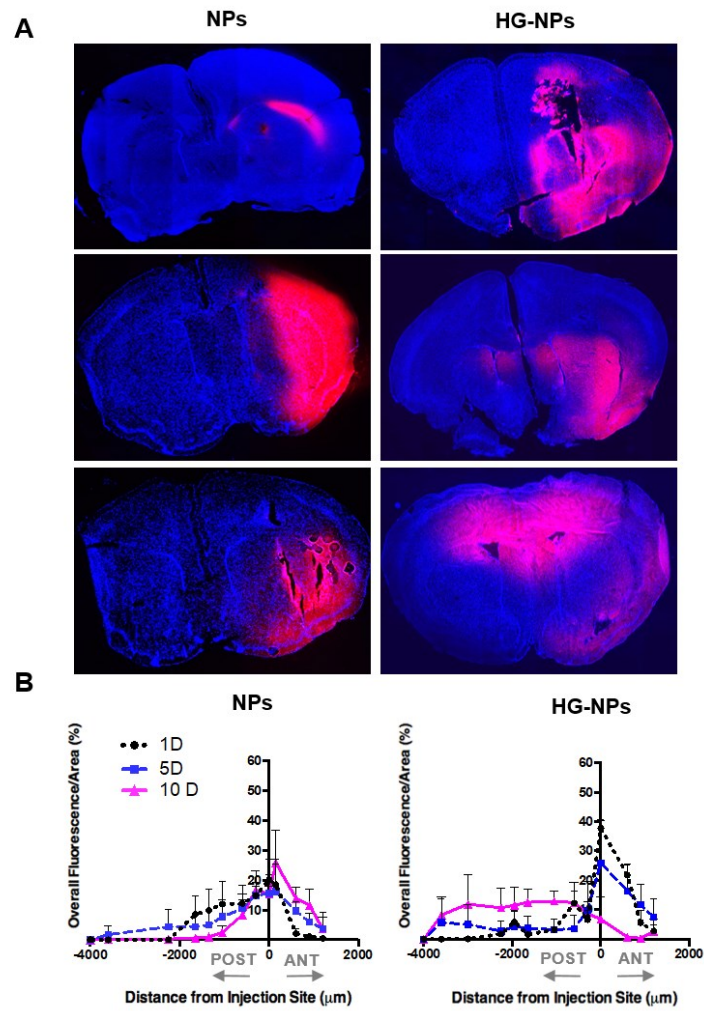


**Supplementary figure 5.** NP distribution after intratumoral injection. A) Epifluorescence evaluation of live mice at 1d post-injection of NPs or HG-NPs. B) and C) Epifluorescence signal of Cy7 in extracted organs (from left: liver, spleen, kidneys, heart and lungs) at 1 d, 5 d, 10 d and 20 d post-injection of NPs (B) and HG-NPs (C).

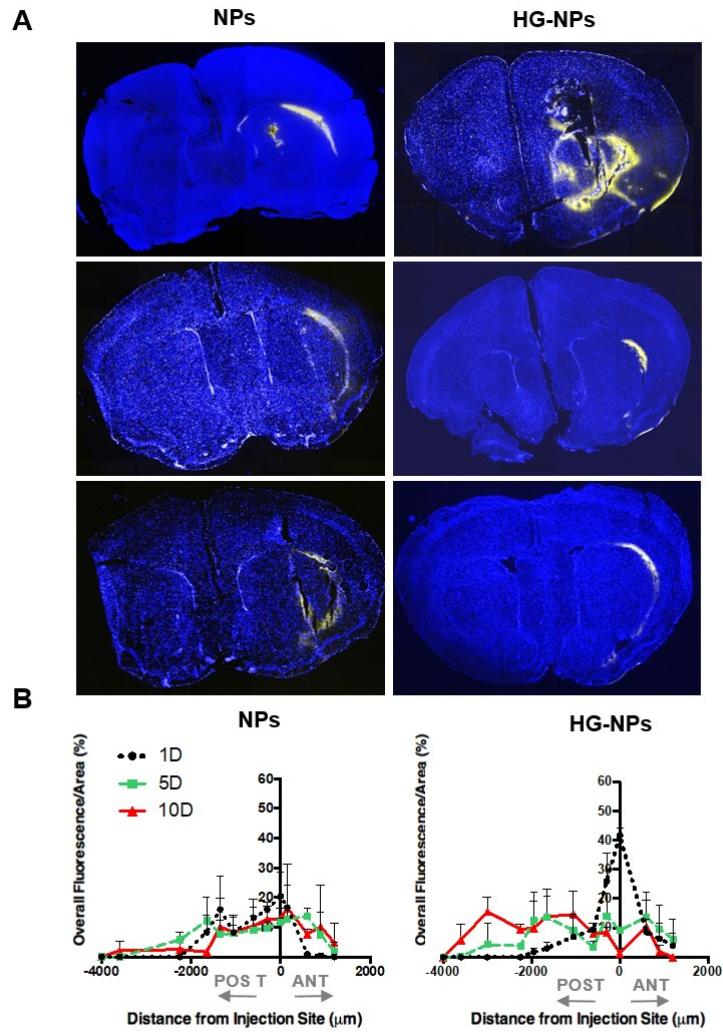
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**Supplementary figure 6.** Epifluorescence visualization of representative brains from tumor-free mice injected with NPs or HG-NPs. A) Cy7 dye quantification in live mice, expressed as % of dose determined at the first time-point (% ID) following injection of free NPs (dashed line) or HG-NPs (solid line). Results are presented as mean  $\pm$  SD. B) 2D IVIS imaging of tumor free mice at timepoints of 1, 5, and 10 d post injection.



**Supplementary figure 7.** Distribution profiles of Cy7-labeled NPs in the coronal and sagittal plane in tumor-free mice. A) Representative confocal images of coronal brain sections at the injection site from tumor free mice injected with NPs and HG-NPs. Nuclei were stained with DAPI (blue); Cy7 is represented by red fluorescence. B) Sagittal distribution profiles measured by detecting the overall fluorescence intensity of Cy7 on coronal sections from tumor-free mice, injected with NPs and HG-NPs.



**Supplementary Figure 8.** Distribution profiles of BODIPY in the coronal and sagittal plane in tumor-free mice. A) Representative confocal images of coronal brain sections at the injection site from tumor free mice injected with NPs and HG-NPs. Nuclei were stained with DAPI (blue); BODIPY is represented by yellow fluorescence. B) Sagittal distribution profiles measured by detecting the overall fluorescence intensity of BODIPY on coronal sections from tumor-free mice, injected with NPs and HG-NPs.