

Supporting Information

3D hydrogel mimics of the tumor microenvironment: interplay between hyaluronic acid, stem and cancer cells

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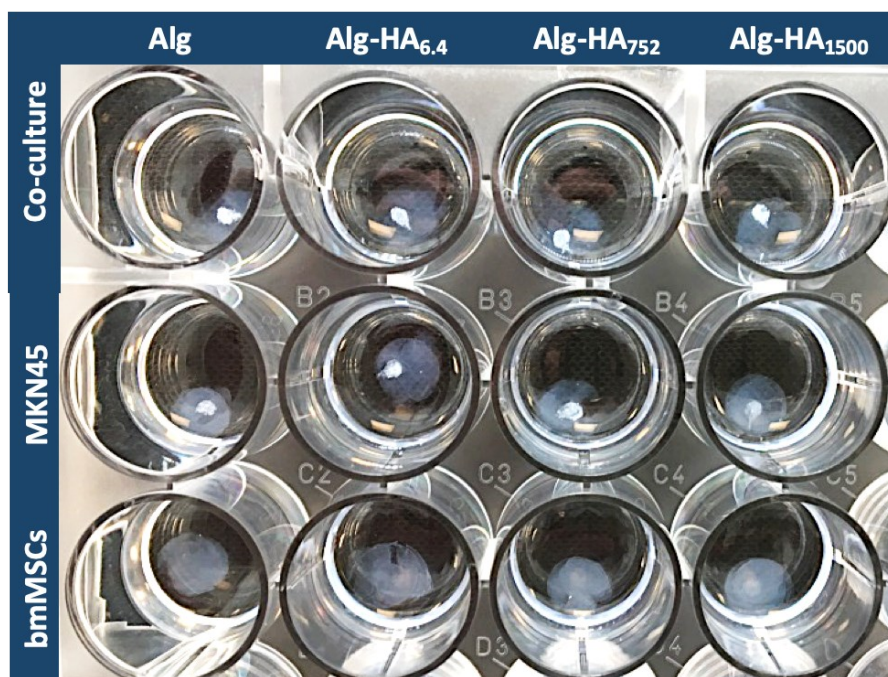


Figure S1. Core-shell hydrogel system combining Alg and HA of different M_w s and used to encapsulate the MKN45 CCs in the core and healthy bmMSCs in the shell.

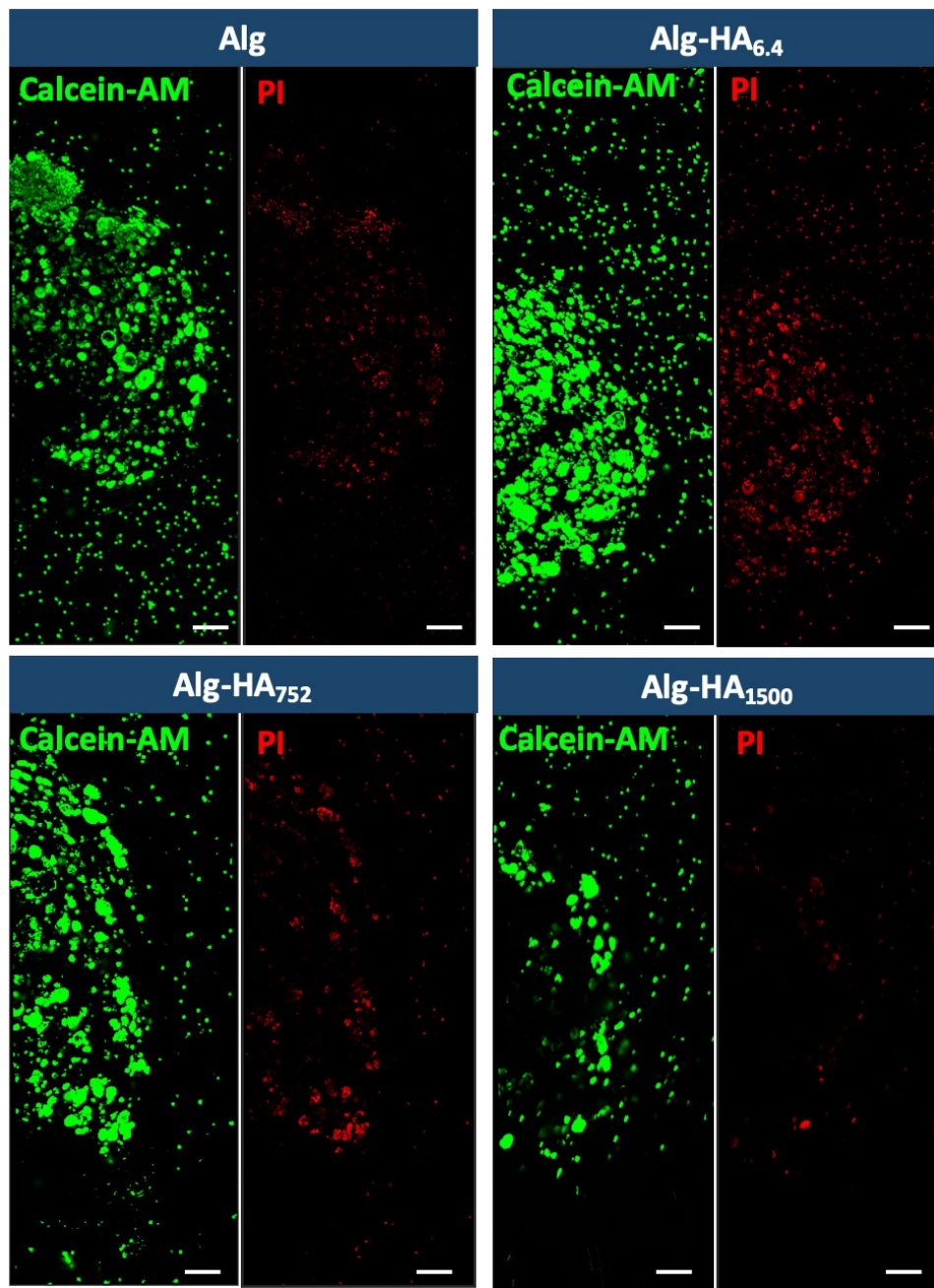


Figure S2. Live/dead of Co-culture core-shell hydrogels with healthy bmMSCs and MKN45. Scale bar corresponds to 200μm.

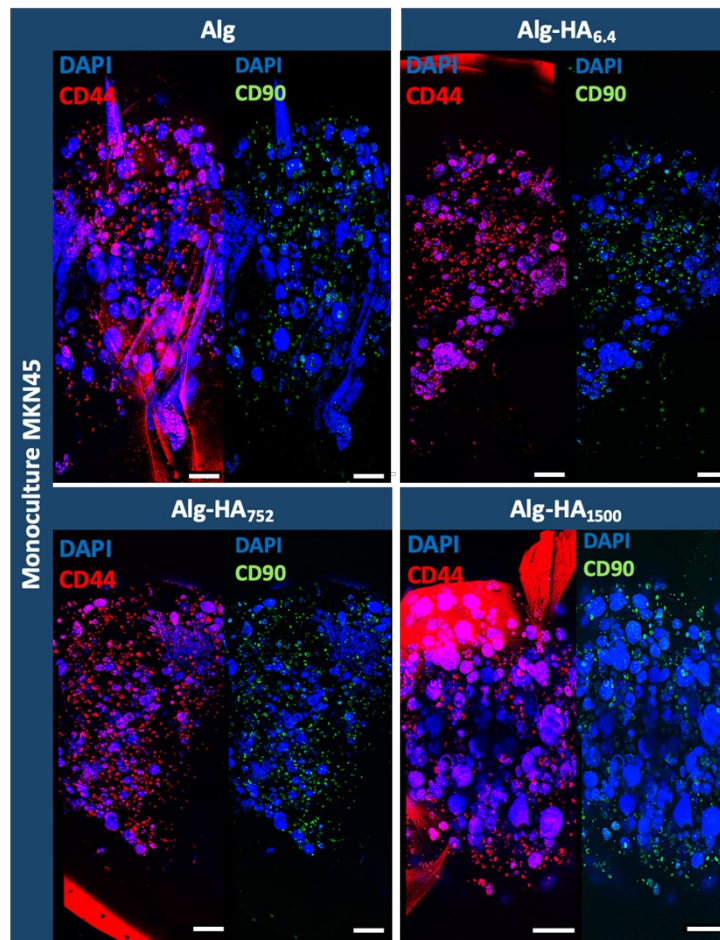


Figure S3. Monocultured core-shell hydrogels with MKN45 gastric CCs encapsulated in the core, stained for CD44 (red), CD90 (green) and nucleus (blue). Scale bar corresponds to 200 μ m.

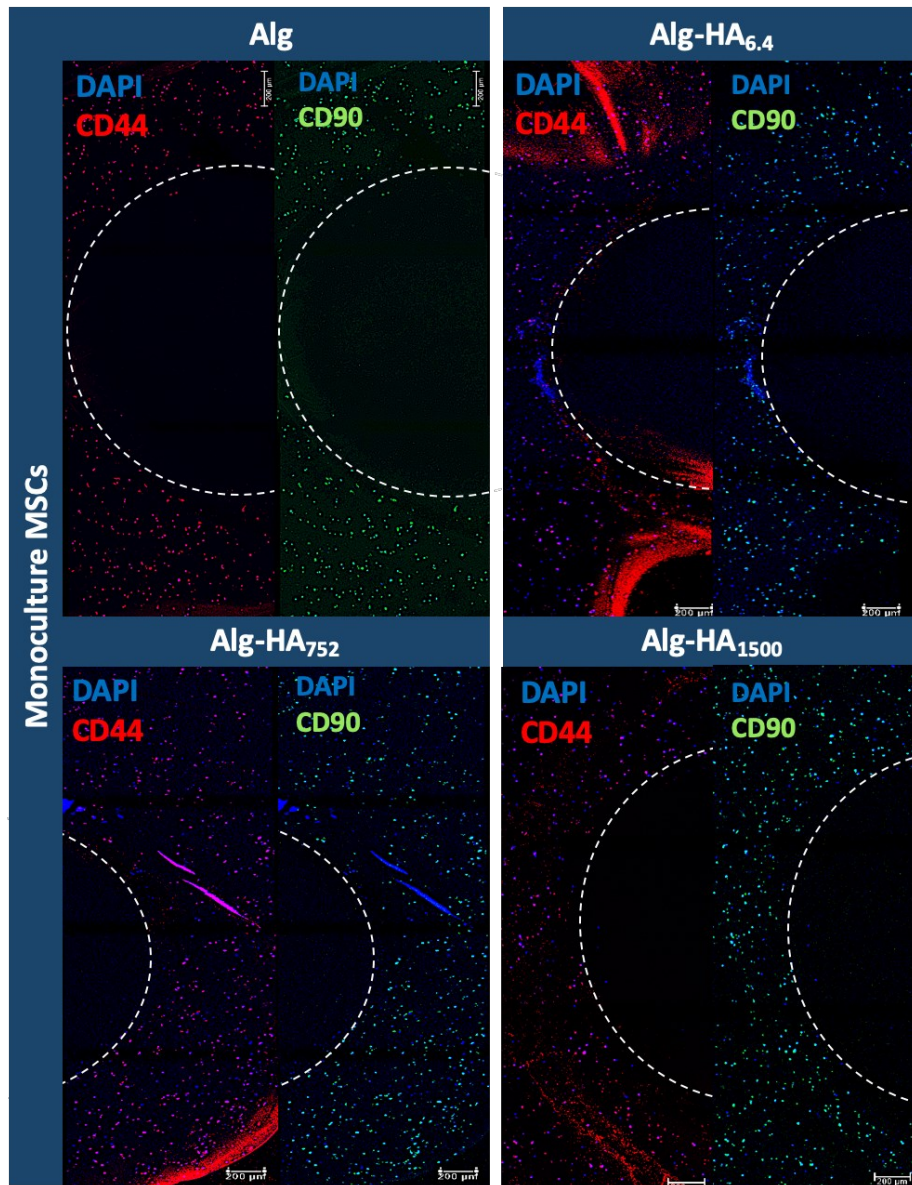


Figure S4. Monoclature core-shell hydrogels with healthy bmMSCs encapsulated in the shell and stained for CD44 (red), CD90 (green) and nucleus (blue). Scale bar corresponds to 200μm.

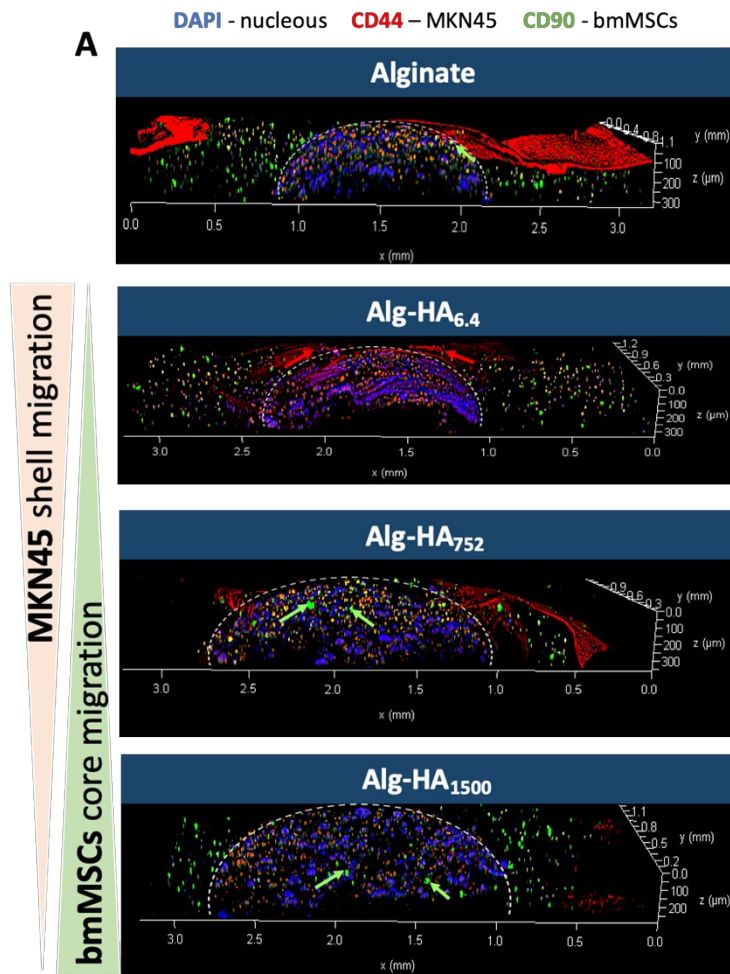


Figure S5. Co-culture core-shell hydrogels with healthy bmMSCs encapsulated in the shell and MKN45 in the core, stained for CD44 (red), CD90 (green) and nucleus (blue). Scale bar corresponds to 200μm. The arrows represent the CCs' migration to the shell (red arrows) and bmMSCs migration to the core (green arrows).

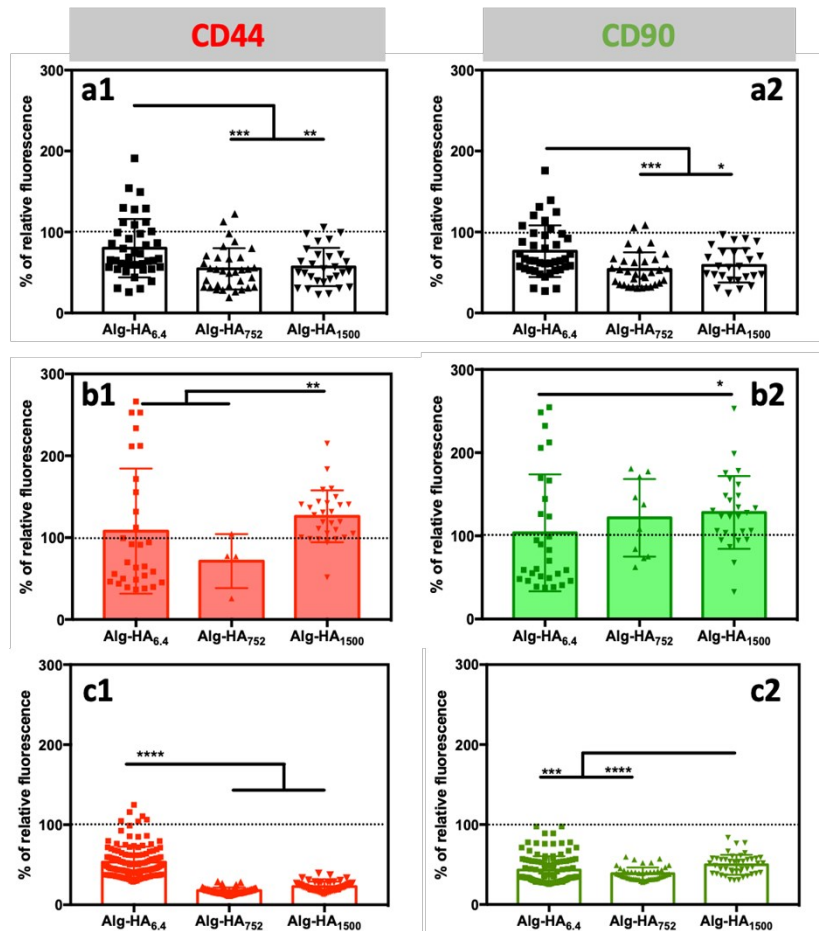


Figure S6. Relative fluorescence intensity of the hydrogel's core stained for CD44 and CD90, under (a1, a2.) monoculture, (b1, b2) co-culture and in the presence of (c1, c2) conditioned medium. Statistical differences **** are marked for $p < 0.0001$ and *** for $p < 0.0002$, ** $p < 0.002$ and * $p < 0.03$. All results are referenced to the fluorescence obtained for the Alg core (no HA).

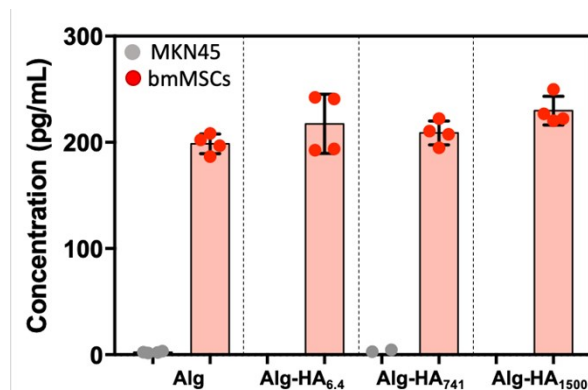


Figure S7. IL-6 secretion measured by ELISA from the cellular monocultures seeded in the different hydrogels.

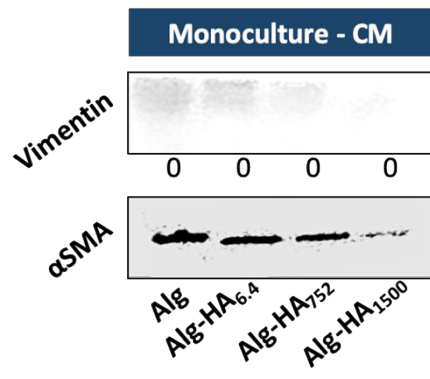


Figure S8. Western Blot analysis of protein lysates from cells present in the core, seeded under conditioned medium conditions.