**Supporting Information for:** 

## Multicellular spheroids containing synthetic mineral particles: an advanced 3D tumor model system to investigate breast precancer malignancy potential according to the mineral type

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**Figure S1. A**. An SEM image of a DCIS spheroid section showing embedded MC analogs. **B.** Magnification of an MC analog in the spheroid section. **C.** EDS analysis showing Ca and P atoms, indicating that the MC consists of calcium phosphate. **D.** Back-scattered electron image of the MC demonstrating how the mineral particles, which appear as bright particles compared to their surrounding organic material, are located during SEM imaging.



**Figure S2**. Western blot with anti Her2 and anti  $\beta$ -Actin antibodies. The four samples were loaded in two duplicates on the same gel. After the transfer, the membrane was cut into two halves. One half was incubated with anti – HER2 (NEU) diluted at 1:50, and the second half was incubated with anti –  $\beta$ -Actin diluted (1:400). HA=low carbonate apatite and CHA=high carbonate apatite.



Figure S3. Raw Western blot data corresponding to Figure S2.