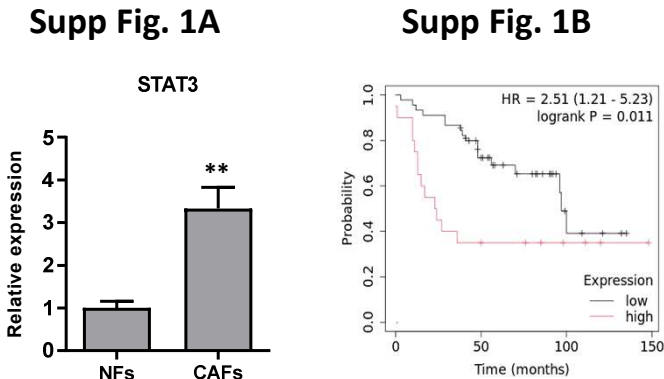
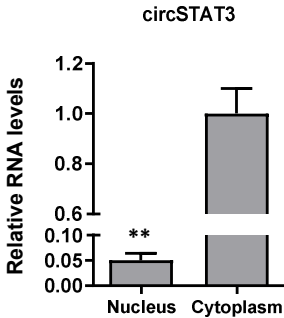


Supplementary Figure 1



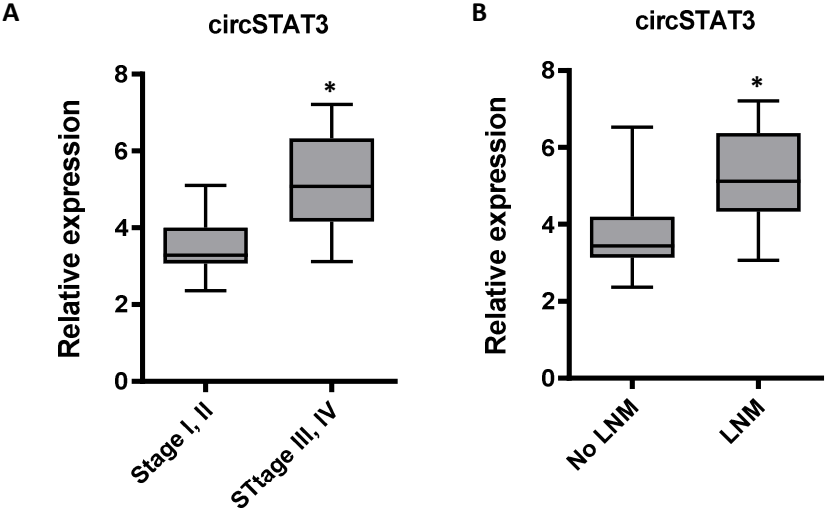
Supplementary Fig. 1. A. RT-qPCR analysis of circSGTAT3 in CAFs compared to NFs. **B.** Kaplan-Meier survival analysis of breast cancer patients stratified by STAT3 expression in CAFs (high vs. low). High STAT3 levels in CAFs correlate with significantly reduced overall survival. n=118.

Supplementary Figure 2



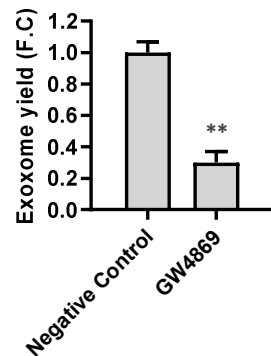
Supplementary Fig. 2. RT-qPCR analysis of circSGTAT3 in the cytoplasm and the nucleus in MDA-MB-231 and SUM159 cells.

Supplementary Figure 3



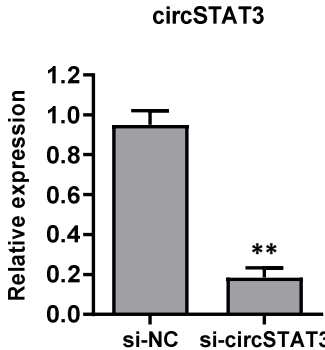
Supplementary Figure 3. High circSTAT3 levels correlate with advanced tumor stage and lymph node metastasis in breast cancer. **A.** RT-qPCR analysis of circSTAT3 expression in breast cancer tissues stratified by tumor stage (Stage I/II vs. III/IV; $p < 0.05$). **B.** Elevated circSTAT3 levels in tumors with lymph node metastasis (LNM) compared to No LNM cases ($p < 0.05$).

Supplementary Figure 4



Supplementary Figure 4. Under hypoxic conditions, CAFs were treated with GW4869—a neutral sphingomyelinase inhibitor that blocks exosome formation. Analysis of exosome concentration revealed that GW4869 reduced exosome yield by more than 70%.

Supplementary Figure 5



Supplementary Figure 5. Validation of circSTAT3 knockdown in breast cancer cells using siRNA. RT-qPCR analysis of circSTAT3 expression in BC cells transfected with three independent siRNAs targeting circSTAT3 versus non-targeting siRNA control (si-NC).