

Figure S1

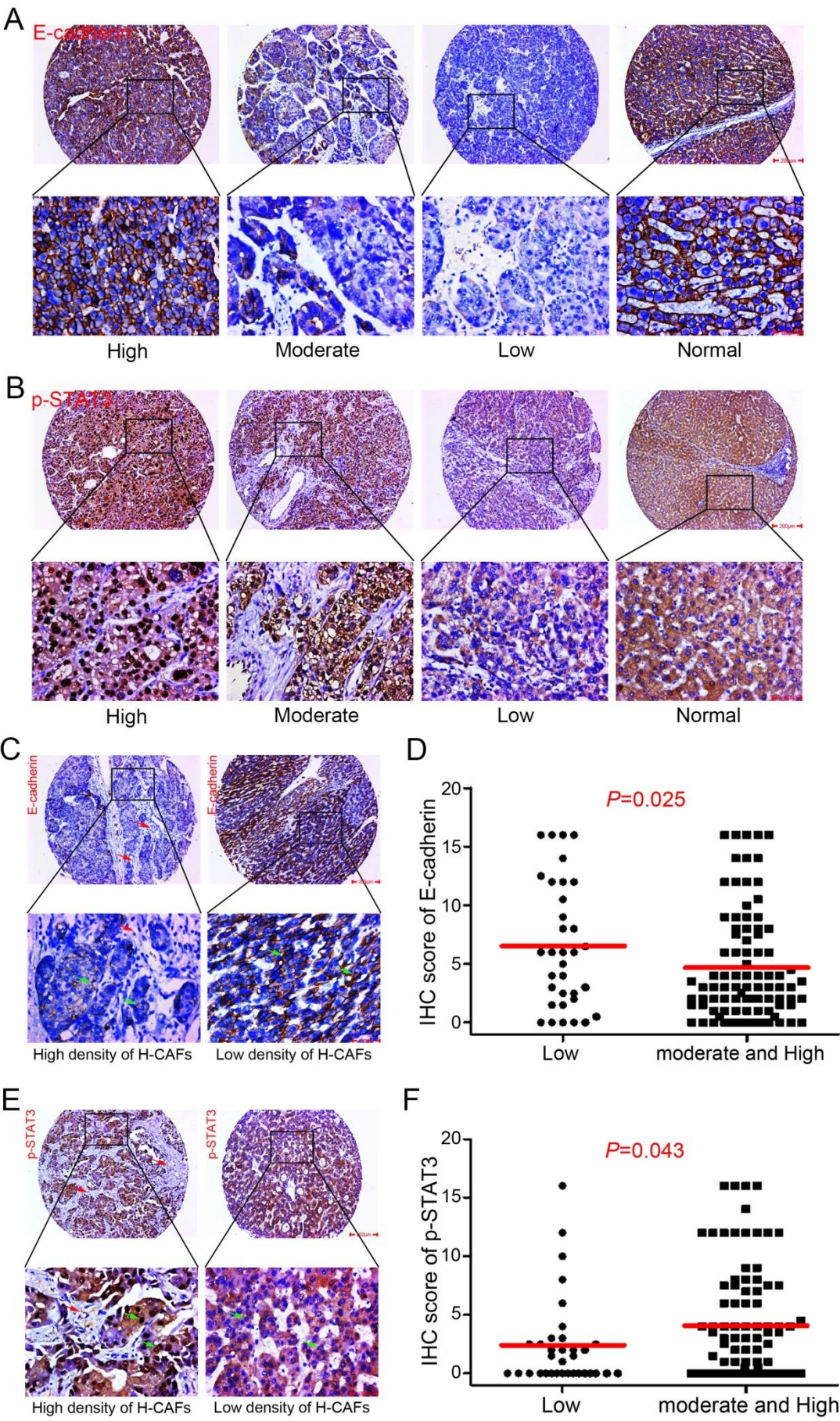


Figure S1. Immunohistochemistry (IHC) analysis of H-CAF density and the expressions of E-cadherin and p-STAT3 in HCC patients. (A) E-cadherin was lowly or moderately expressed in the cancer cell cytoplasm, whereas it was highly expressed in well-differentiated or normal tissue (original magnification, 100 \times). An enlarged view is shown in the lower panel (original magnification, 400 \times). (B) p-STAT3 was highly or moderately expressed in the cancer cell nucleus, whereas it was lowly expressed in well differentiated or normal tissue (original magnification, 100 \times). An enlarged view is displayed in the lower panel (original magnification, 400 \times). (C) A high density of H-CAFs in the samples was associated with low E-cadherin expression, whereas a low density of H-CAFs was associated with high E-cadherin expression (original magnification, 100 \times). The lower panel shows the enlarged view (original magnification, 400 \times). (D) IHC scores of E-cadherin were compared in the subgroups with dichotomized H-CAFs density (low VS moderate and high). (E) Correlation of H-CAFs density with p-STAT3 expression. (The p-STAT3 and E-cadherin expression, brown color, green row; H-CAFs, unstained, red row). (F) IHC scores of p-STAT3 were compared in the subgroups of H-CAFs density.

Figure S2

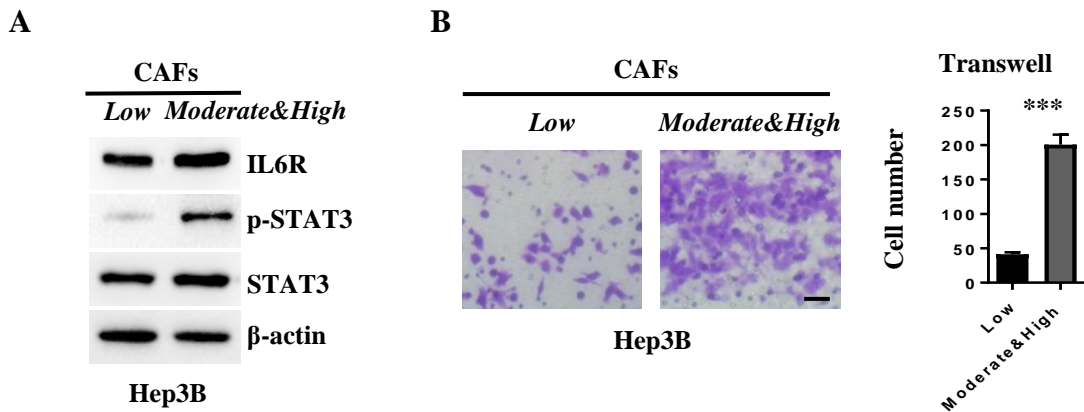


Figure S2. (A) Western blotting and (B) transwell analysis of Hep3B, treated with H-CAFs^{low} or H-CAFs^{moderate/high}, were performed.

Figure S3

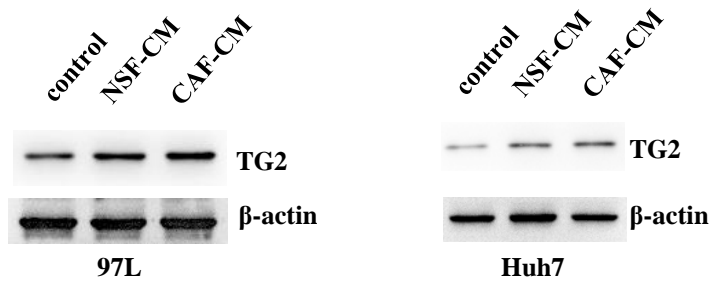


Figure S3. TG2 expression was tested in MHCC-97L and Huh7 cell lines by western blotting.

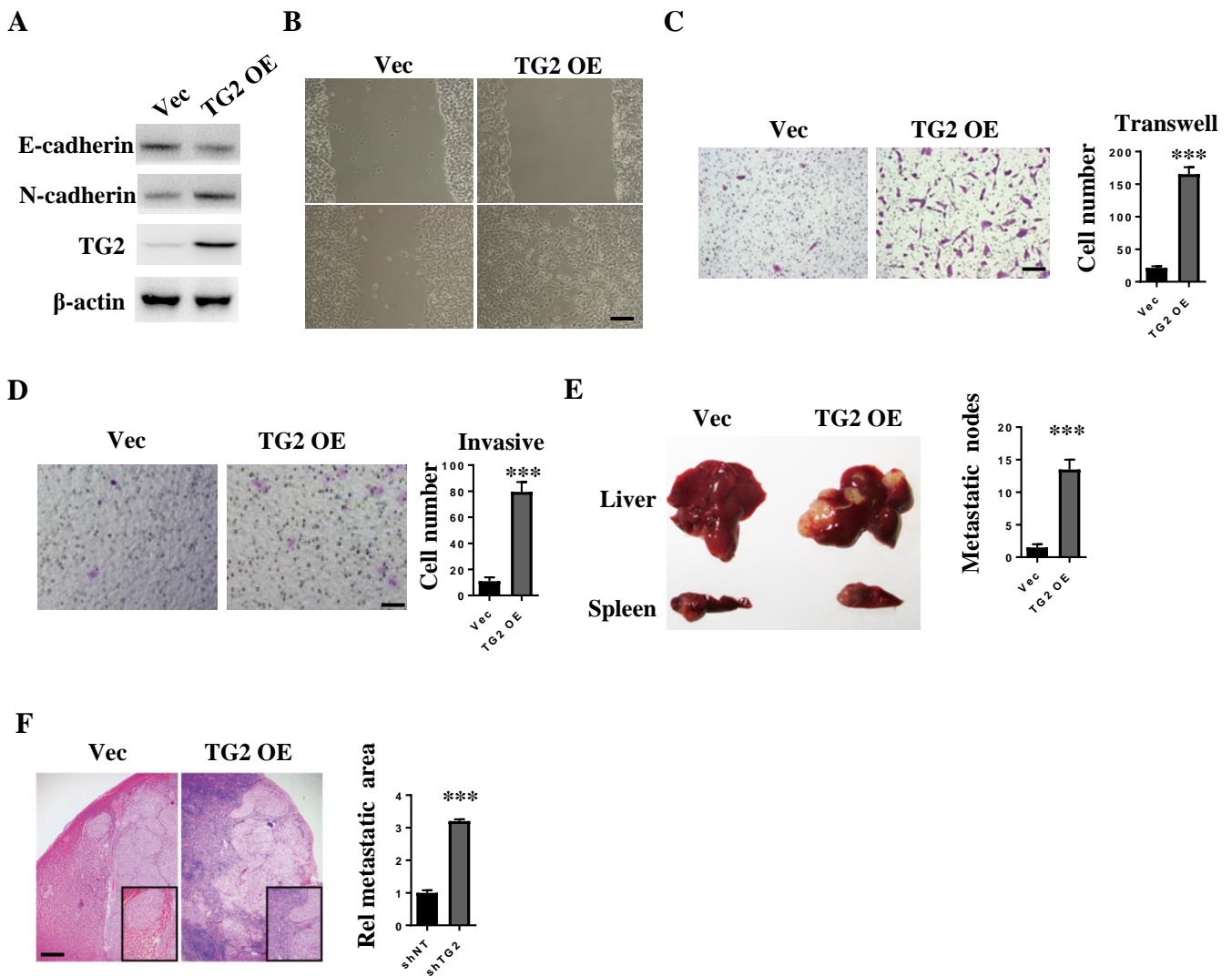
Figure S4

Figure S4. Overexpression of TG2 induced EMT of HCC cells. The error bars represent \pm SEM; * $P < 0.05$, *** $P < 0.001$). (A) TG2 was stably overexpressed by CMV promoter in Huh7 cells. An empty vector was used as a control. N-cadherin and E-cadherin were used as indicators of EMT initiation. (B) Wound healing, (C) transwell, and (D) invasive assays were performed using Huh7-Vec and TG2 OE cells. (E) In the nude mouse metastatic tumor model, Huh7-Vec or TG2 OE cells were injected into the spleen of nude mice. After 21 days, the tumor of liver metastases was counted and then confirmed by H&E staining (F). Original magnification, $50\times$.