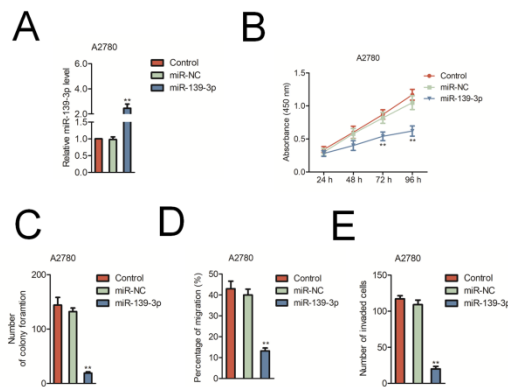
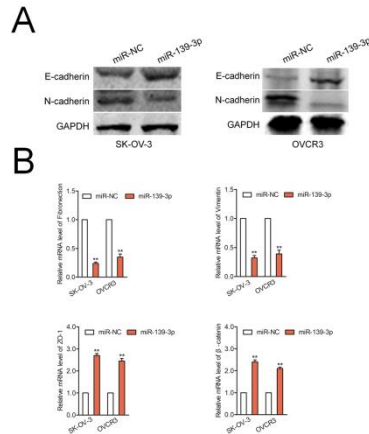


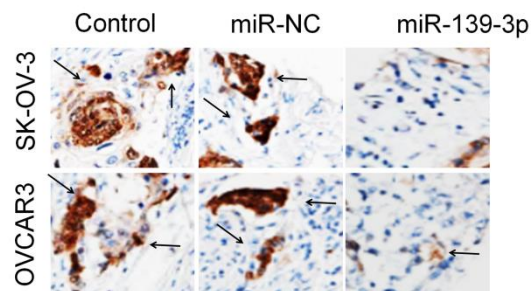
Supplementary Figure 1. A. The levels of miR-139-5p in ovarian cancer tissues and adjacent normal tissues were detected using qRT-PCR analysis. **B.** qRT-PCR analysis of miR-139-5p in OVCAR-3, SK-OV-3 and A2780, and normal ovarian epithelial cell, IOSE80.



Supplementary Figure 2. MiR-139-3p inhibits A2780 cell proliferation, migration and invasion. **A.** qRT-PCR analysis of miR-139-3p expression in miR-139-3p or miR-NC transfected A2780 cells. **B.** CCK8 assay showing cell proliferation rates of miR-139-3p or miR-NC transfected A2780 cells. **C.** Estimation of colonies in A2780 cells stable expressing miR-139-3p or miR-NC. **D.** Wound healing assay showing migration of control and miR-139-3p overexpressing A2780 cells. **E.** Transwell assay showing invasiveness of control and miR-139-3p overexpressing A2780 cells. ** $P < 0.01$ compared to control.



Supplementary Figure 3. miR-139-3p reverses the EMT process of ovarian cancer cell. **A.** SK-OV-3 and OVCAR3 cells were transfected with miR-NC or miR-139-3p and the expressions of N-cadherin and E-cadherin were detected using western blotting assay. **B.** The mRNA levels of epithelial markers (ZO-1 and β-catenin) and mesenchymal markers (Vimentin and Fibronectin) in SK-OV-3 and OVCAR3 cells were measured by qRT-PCR analysis. ** $P < 0.01$ compared with miR-NC.



Supplementary Figure 4. The expression of ELAVL1 in lung tissue was detected using immunochemistry (IHC) staining.

Supplementary Table 1. Relationship between the expression of miR-139-3p and clinicopathological parameters in patients with ovarian cancer.

Parameter	miR-139-3p		p-value
	High (n)	Low (n)	
Age (years)			0.231
<50	7	6	
>50	3	5	
Tumor histology			0.409
Serous	6	8	
Mucinous	2	1	
Endometrioid	3	1	
FIGO stage			0.02
I	2	7	
II	1	6	
III	2	3	
Lymph node metastasis			0.005
Yes	4	9	
No	5	3	

FIGO: International Federation of Gynecology and Obstetrics