

CORRECTION

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# Correction to: USP13 functions as a tumor suppressor by blocking the NF-κB-mediated PTEN downregulation in human bladder cancer

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**Correction to: J Exp Clin Cancer Res 38, 259 (2019)**  
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Following publication of the original article [1], the authors identified minor errors in Figs. 2, 4 and 6, specifically:

- In Fig. 2e, incorrect image was used for migration of 5637 cells after miR-301b overexpression (1<sup>st</sup> row, 3<sup>rd</sup> column)
- In Fig. 2h, incorrect images were used for UM-UC-3/Sh-USP13 (2<sup>nd</sup> row, 1<sup>st</sup> and 2<sup>nd</sup> columns)
- In Fig. 4f, incorrect image was used for migration assay of UM-UC-3 (4<sup>th</sup> row, 2<sup>nd</sup> column)
- In Fig. 6a, incorrect images were used to demonstrate USP13 Low for both PTEN and USP13 immunohistochemistry staining (2<sup>nd</sup> row, 1<sup>st</sup> and 2<sup>nd</sup> columns)

The corrected figures are given here. The corrections do not have any effect on the final conclusions of the paper. The original article has been corrected.

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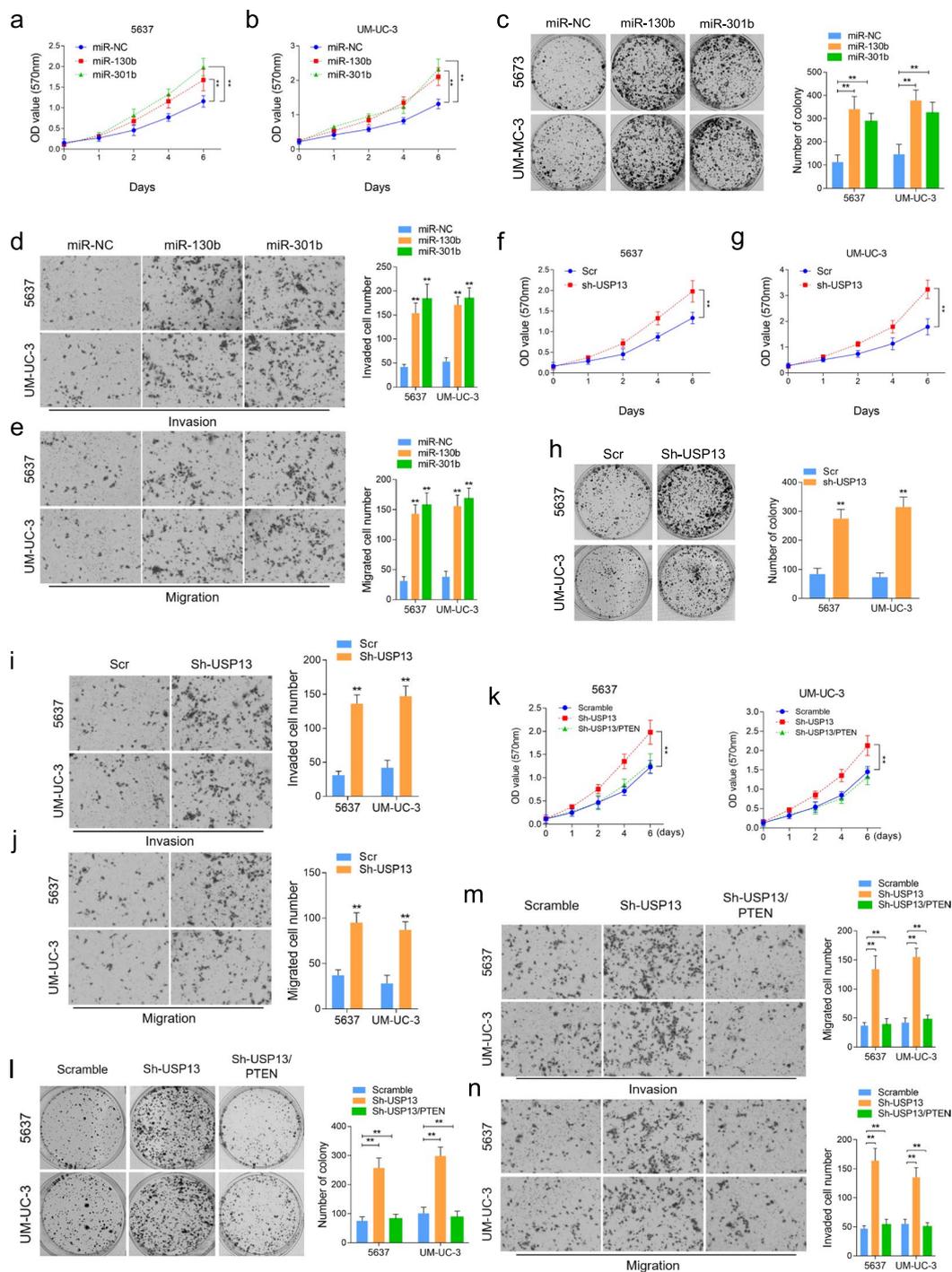
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#### Reference

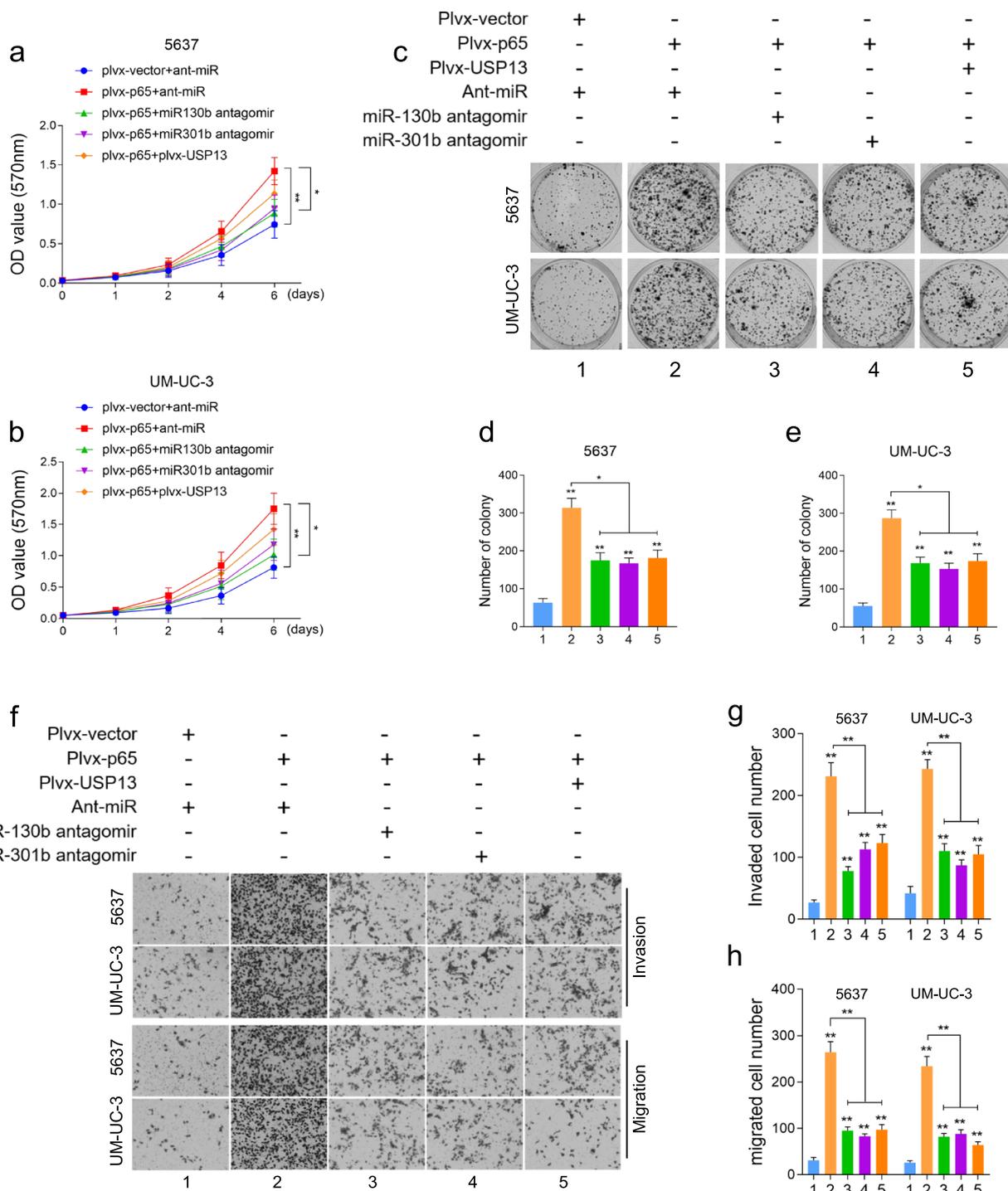
1. Man X, Piao C, Lin X, et al. USP13 functions as a tumor suppressor by blocking the NF-κB-mediated PTEN downregulation in human bladder cancer. *J Exp Clin Cancer Res*. 2019;38:259. <https://doi.org/10.1186/s13046-019-1262-4>.



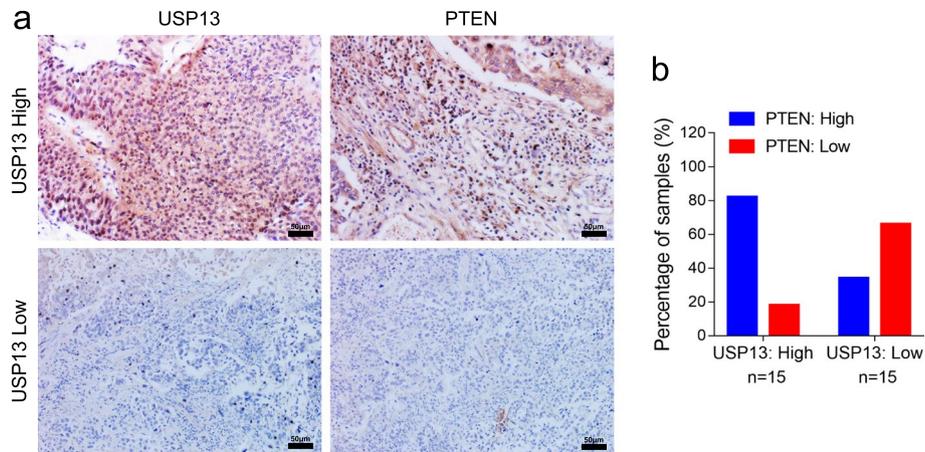
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**Fig. 2** The biological function of miR-130b/301b and USP13 in vitro. Cell proliferative capacity was measured by Cell Counting-Kit 8 (CCK-8) (a and b) assay and colony formation assay (e) in miR-130b/301b overexpressed 5637 and UM-UC-3 cells. CCK-8 (c and d) and colony formation assay (f) were also performed to evaluate the cellular proliferation in USP13 knocked down 5637 and UM-UC-3 cells. Cell invasive and migrative capacities were measured by transwell assay in miR-130b/301b overexpressed (g and h) or USP13 knocked down (i and j) 5637 and UM-UC-3 cells. Cell proliferation was detected by CCK-8 (k) and colony formation assay (l) in USP13 knocked down alone or USP13 knocked down as well as PTEN expression restored 5637 and UM-UC-3 cells. Cell invasive (m) and migrative (n) capacities were measured by Transwell assay in USP13 knocked down alone or USP13 knocked down as well as PTEN expression restored 5637 and UM-UC-3 cells. Original magnification: 400x. \* $P < 0.05$  and \*\* $P < 0.01$ , as determined by Student's T-test



**Fig. 4** The biological function of NF- $\kappa$ B/miR-130b~301b/USP13 axis in vitro. **a-e**. NF- $\kappa$ B p65 was overexpressed in BC cells by transfecting with pLvx-NF- $\kappa$ B p65, then followed by transfection of antagomir of miR-130b/301b or USP13 overexpression. Cell proliferation index was determined by CCK-8 assay and cell colony formation assay. Each group was indicated as: 1 empty vector; 2 NF- $\kappa$ B p65 overexpression; 3 NF- $\kappa$ B p65 overexpression with miR-130b knockdown; 4 NF- $\kappa$ B p65 overexpression with miR-301b knockdown; 5 NF- $\kappa$ B p65 overexpression with restoration of USP13 expression. **f-h**. Cell invasive and migrative capacities were determined by Transwell assay. The cells were grouped as described in **(a)**. Original magnification: 400 $\times$ . \* $P < 0.05$  and \*\* $P < 0.01$ , as determined by Student's T-test



**Fig. 6** High PTEN levels correlate with USP13 overexpression in a subset of human bladder cancer tissue specimens. **a.** Representative images demonstrating PTEN and USP13 immunohistochemistry (IHC) staining of human bladder cancer tissue specimens from 30 bladder cancer patients. **b.** Quantification of PTEN or USP13 staining in BC tissue specimens. Staining intensity of PTEN or USP13 was scored as 0 to 3 (0: no staining, 1: weak staining, 2: medium staining, and 3: strong staining). 0 and 1 were classified as low-expression, whereas 2 and 3 were defined as high-expression. High PTEN expression was correlated with high USP13 expression ( $P < 0.05$ , Fisher's exact test)