



Corrigendum: DDX19A Promotes Metastasis of Cervical Squamous Cell Carcinoma by Inducing NOX1-Mediated ROS Production

Yanhui Jiang^{1,2†}, Baibin Wang^{2†}, Yongliang Li^{3†}, Jiahui Shen¹, Yutao Wei¹, Hanjie Li^{2,4}, Shangqiu Chen¹, Hua Yang¹, Famin Zeng², Changqing Liu¹, Feng Wang¹, Huanhuan He^{2*}, Yong Chen^{1*†} and Jihong Liu^{1,5*†}

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Antonella Zannetti,
Institute of Biostructure and
Bioimaging (CNR), Italy

*Correspondence:

Jihong Liu
liujh@mail.sysu.edu.cn
Yong Chen
cy840508@163.com
Huanhuan He
hehh23@mail.sysu.edu.cn

[†]These authors have contributed
equally to this work

[†]These authors have contributed
equally to this work and share
senior authorship

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¹ Department of Gynecology, The Fifth Affiliated Hospital of Sun Yat-sen University, Zhuhai, China, ² Guangdong Provincial Key Laboratory of Biomedical Imaging and Guangdong Provincial Engineering Research Center of Molecular Imaging, The Fifth Affiliated Hospital of Sun Yat-sen University, Zhuhai, China, ³ Department of Pathology, The Fifth Affiliated Hospital of Sun Yat-sen University, Zhuhai, China, ⁴ Department of Interventional Medicine, The Fifth Affiliated Hospital of Sun Yat-sen University, Zhuhai, China, ⁵ Department of Gynecologic Oncology, State Key Laboratory of Oncology in South China, Sun Yat-sen University Cancer Center, Guangzhou, China

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DDX19A Promotes Metastasis of Cervical Squamous Cell Carcinoma by Inducing NOX1-Mediated ROS Production

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In the original article, there were errors in **Figures 2C, D, 4C** and **5D** as published. Wrong Western blot pictures were accidentally used in the **Figures 2C, D** and **4C**. The corrected **Figure 2** and **Figure 4** appear below. There was also an error in the images used in **Figure 5D**. The corrected **Figure 5** appears below.

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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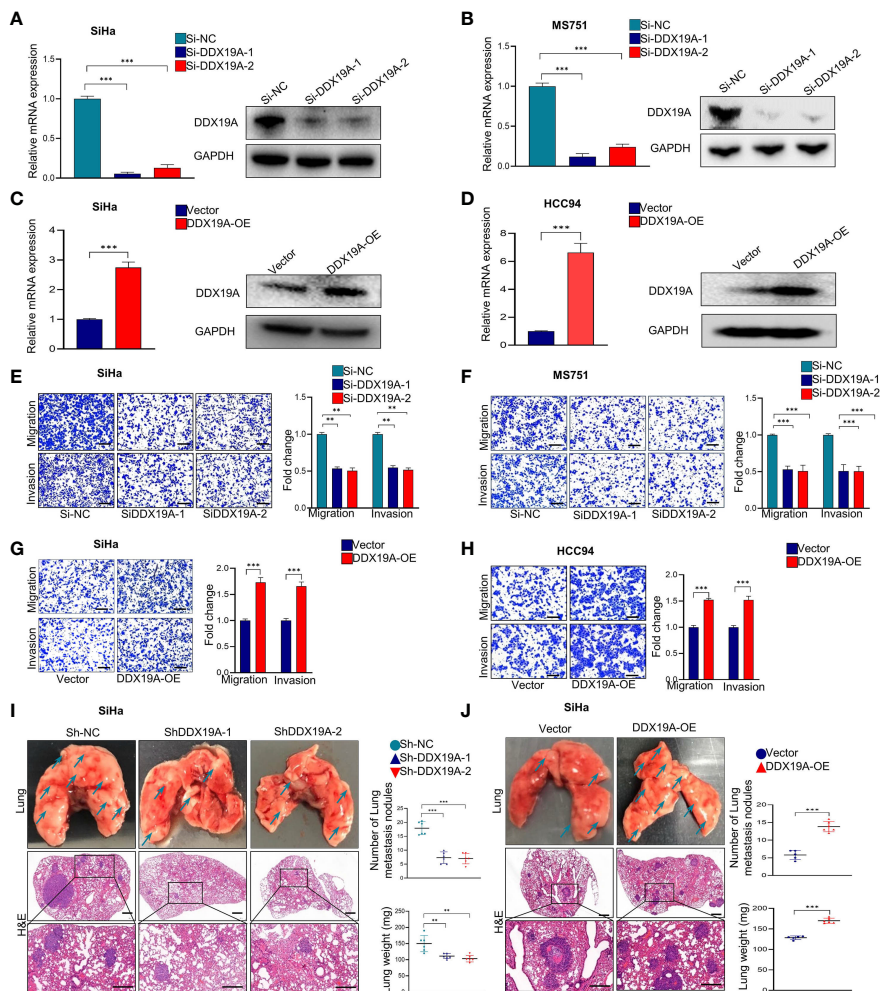


FIGURE 2 | DEAD-box helicase 19A (DDX19A) promotes the metastasis of cervical squamous cell carcinoma (CSCC) cells *in vitro* and *in vivo*. **(A, B)** qRT-PCR and Western blot were employed to evaluate the efficacy of DDX19A mRNA and protein knockdown in SiHa and MS751 (n = 3). **(C, D)** qRT-PCR and Western blot were employed to evaluate the efficacy of DDX19A mRNA and protein overexpression in SiHa and HCC94 (n = 3). **(E, F)** Cell migration assay and Matrigel invasion assay were employed to investigate the effect of DDX19A knockdown in SiHa and MS751 cell migration and invasion ability (scale bar: 200µm) (n = 3). **(G, H)** Cell migration assay and Matrigel invasion assay were employed to investigate the effect of DDX19A overexpression in SiHa and HCC94 cell migration and invasion ability (scale bar: 200µm) (n = 3). **(I, J)** Arrows showed the representative results of metastatic lung nodules. H&E staining was used to stain metastatic lung nodules (200× and 400× magnification; scale bar: 200µm). Dot plots showed the results of the number of lung metastasis nodules and lung weight (n = 6). Results represent three independent experiments **(A–H)**. The results were shown as means ± SD, **p < 0.01, ***p < 0.001 by two-tailed Student’s t-test.

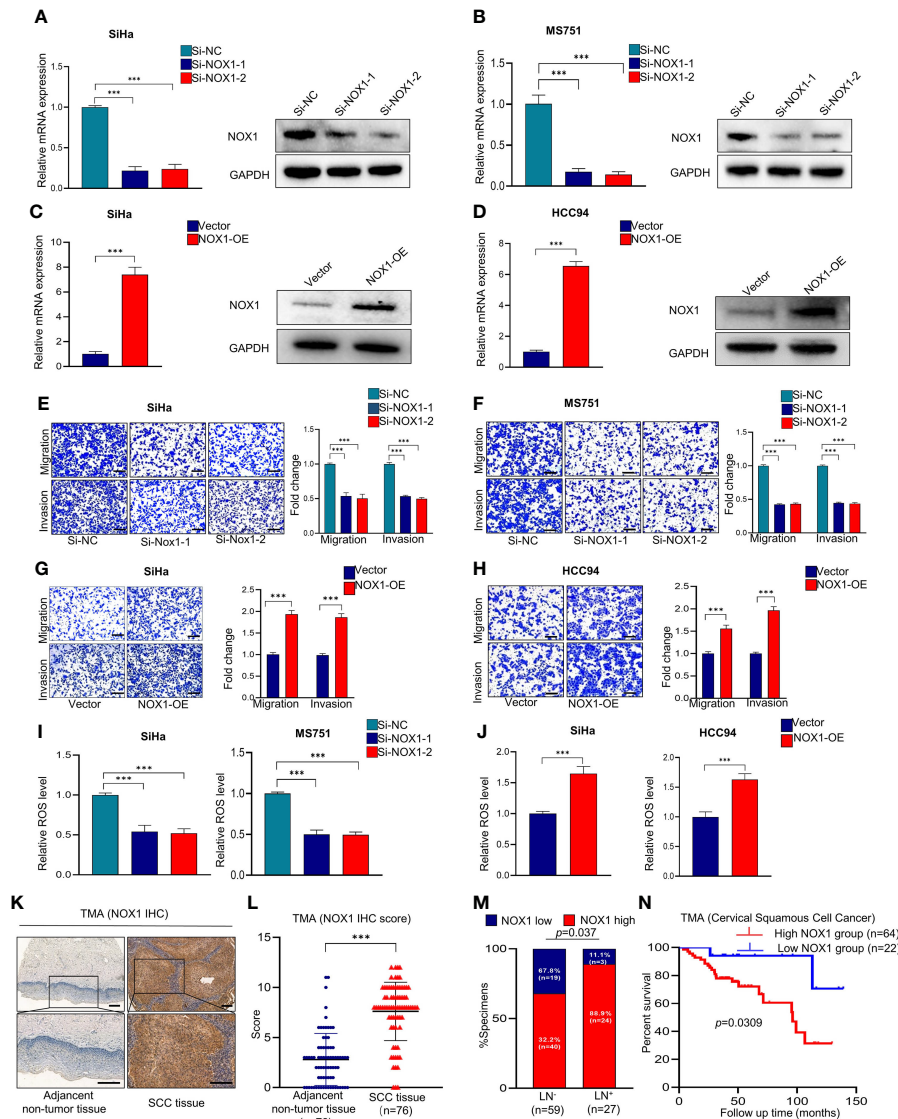


FIGURE 4 | NADPH oxidase 1 (NOX1) promotes metastasis and reactive oxygen species (ROS) production in cervical squamous cell carcinoma (CSCC) cells and may serve as a prognostic marker in CSCC patients. **(A, B)** qRT-PCR and Western blot were employed to evaluate the knockdown efficacy of NOX1 in SiHa and MS751 (n = 3). **(C, D)** qRT-PCR and Western blot were employed to evaluate the overexpression efficacy of NOX1 in SiHa and HCC94 (n = 3). **(E, F)** Cell migration assay and Matrigel invasion assay were employed to investigate the effects of NOX1 knockdown cells (SiHa and MS751) (scale bar: 200µm). **(G, H)** Cell migration assay and Matrigel invasion assay were employed to investigate the effects of NOX1-overexpressing cells (SiHa and HCC94) (scale bar: 200µm). **(I)** ROS level was reduced in NOX1 knockdown cells (SiHa and MS751). **(J)** ROS level was increased in NOX1-overexpressing cells (SiHa and HCC94) (n = 3). **(K)** Representative images of the immunohistochemical (IHC) staining of NOX1 in human CSCC tissues and adjacent non-tumor tissues (scale bar: 200µm). **(L)** Dot plots to show the IHC score of DDX19A expression using 76 pairs of CSCC tissues and adjacent non-tumor tissues tumor microarray (TMA) tissue sections ($p < 0.001$). **(M)** Correlation between lymph node metastasis and DDX19A expression in CSCC patients. Chi-square test was used. **(N)** Kaplan–Meier analysis was performed for our CSCC patients’ cohort to evaluate the association between DDX19A protein level and 86 CSCC patients’ overall survival. Results represent three independent experiments **(A–J)**. The results were shown as mean \pm SD, *** $p < 0.001$ by two-tailed Student’s t-test.

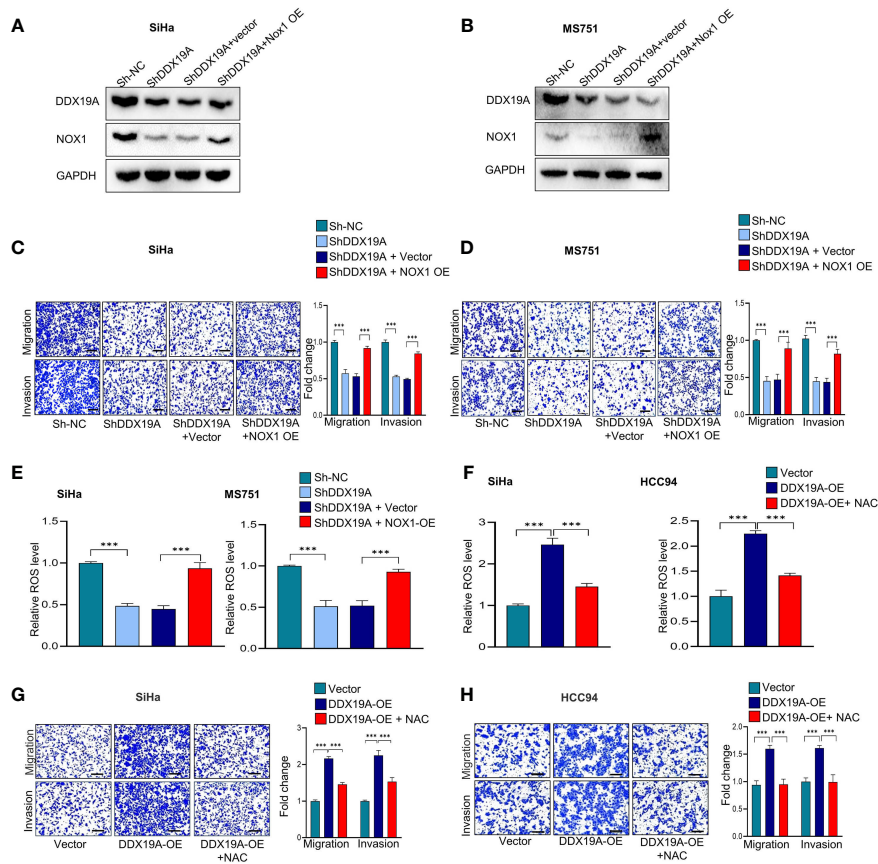


FIGURE 5 | The NADPH oxidase 1 (NOX1)/reactive oxygen species (ROS) axis exerts a pro-metastasis effect downstream of DEAD-box helicase 19A (DDX19A). **(A, B)** Western blot was employed to evaluate the overexpression efficacy of NOX1 proteins in DDX19A knockdown cell lines (SiHa and MS751) (n = 3). **(C, D)** Cell migration assay and Matrigel invasion assay were performed to evaluate whether restoring NOX1 expression could increase cellular migration and invasion in DDX19A knockdown cell lines (SiHa and MS751) (n = 3). **(E)** The 2',7'-dichlorodihydrofluorescein diacetate (DCFH-DA) fluorescence assay was performed to investigate whether NOX1 overexpression weakens the increase of ROS production induced by DDX19A knockdown in SiHa and MS751. **(F)** The DCFH-DA fluorescence assay was used to examine the ROS level in DDX19A-overexpressing cell lines (SiHa and HCC94) treated with or without N-acetylcysteine (NAC) (ROS inhibitor). **(G, H)** Cell migration assay and Matrigel invasion assay were performed to investigate whether NAC treatment could recover cell migration and invasion ability in DDX19A-overexpressing cell lines (SiHa and HCC94) (scale bar: 200µm). Results represent three independent experiments. The results were shown as mean ± SD, ***p < 0.001 by two-tailed Student's t-test.