



Correction to: Nanotechnology-augmented sonodynamic therapy and associated immune-mediated effects for the treatment of pancreatic ductal adenocarcinoma

Hadi, M. M., Farrell, S., Nesbitt, H., Thomas, K., Kubajewska, I., Ng, A., Masood, H., Patel, S., Sciscione, F., Davidson, B., Callan, J. F., MacRobert, A. J., McHale, A. P., & Nomikou, N. (2023). **Correction to: Nanotechnology-augmented sonodynamic therapy and associated immune-mediated effects for the treatment of pancreatic ductal adenocarcinoma:** Nanotechnology-augmented sonodynamic therapy and associated immune-mediated effects for the treatment of pancreatic ductal adenocarcinoma (*Journal of Cancer Research and Clinical Oncology*, (2023), 149, 8, (5007-5023), 10.1007/s00432-022-04418-y). *Journal of cancer research and clinical oncology*, 149(10), 8165-8166. <https://doi.org/10.1007/s00432-023-04648-8>

[Link to publication record in Ulster University Research Portal](#)

Published in:

Journal of cancer research and clinical oncology

Publication Status:

Published (in print/issue): 01/08/2023

DOI:

[10.1007/s00432-023-04648-8](https://doi.org/10.1007/s00432-023-04648-8)

Document Version

Publisher's PDF, also known as Version of record

General rights

Copyright for the publications made accessible via Ulster University's Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The Research Portal is Ulster University's institutional repository that provides access to Ulster's research outputs. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact pure-support@ulster.ac.uk.



Correction to: Nanotechnology-augmented sonodynamic therapy and associated immune-mediated effects for the treatment of pancreatic ductal adenocarcinoma

Marym Mohammad Hadi¹ · Sian Farrell² · Heather Nesbitt² · Keith Thomas² · Ilona Kubajewska^{1,3} · Alex Ng¹ · Hamzah Masood¹ · Shiv Patel¹ · Fabiola Sciscione¹ · Brian Davidson¹ · John F. Callan² · Alexander J. MacRobert¹ · Anthony P. McHale² · Nikolitsa Nomikou¹

Published online: 22 March 2023
© Springer-Verlag GmbH Germany, part of Springer Nature 2023

Correction to:
Journal of Cancer Research and Clinical Oncology
<https://doi.org/10.1007/s00432-022-04418-y>

In Fig. 5 of this article, there were two errors in Fig. 5c, right panel. Firstly, the title of the graph (in the right panel) that had read “Target tumour” should have read “Off-target tumour”. In addition, the graph had presented the raw

tumour volume data, and it should have presented the % tumour volume increase data. Asterisks that depict the level of significance had also been missing;

The Fig. 5c should have appeared as shown below:

The original article can be found online at <https://doi.org/10.1007/s00432-022-04418-y>.

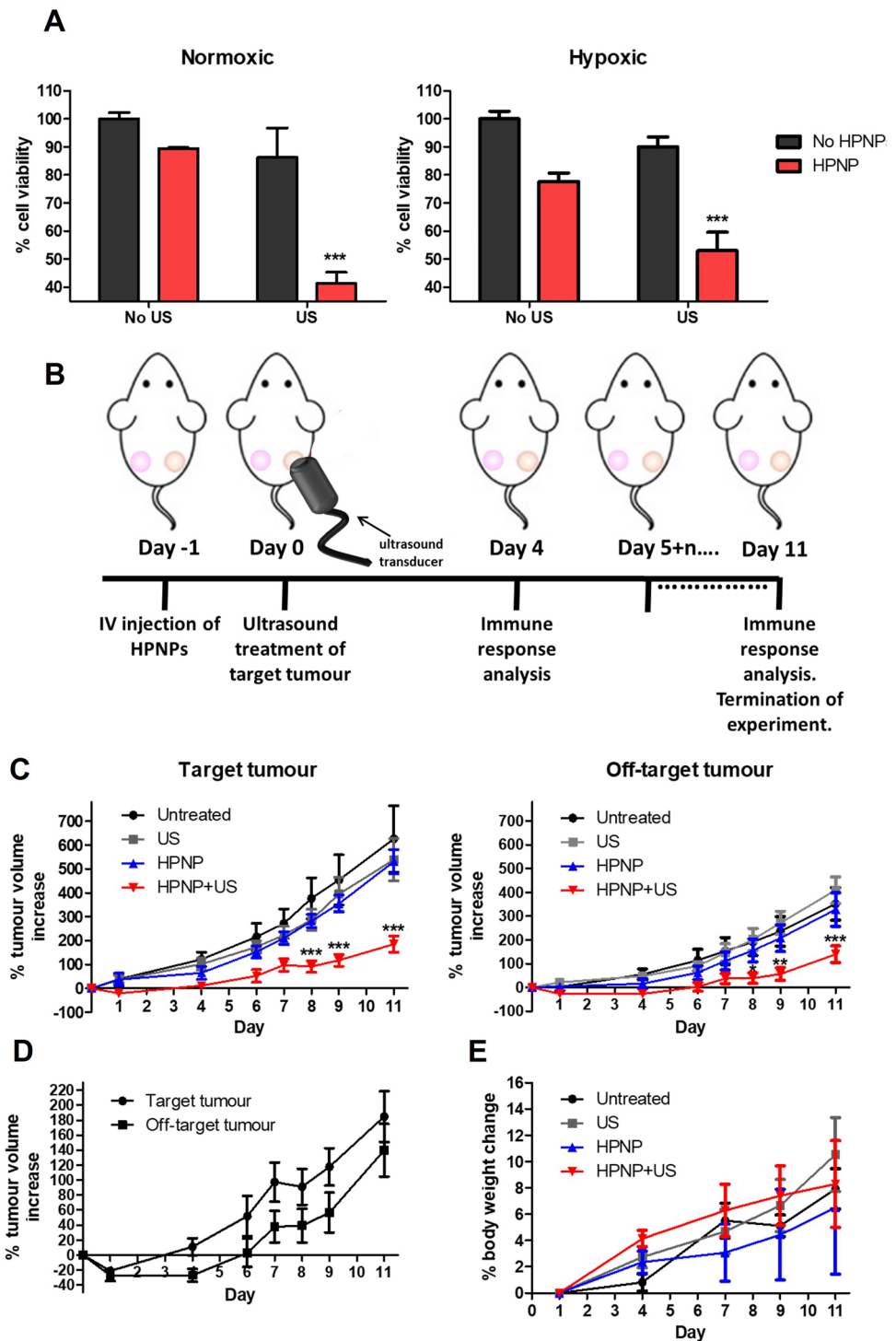
✉ Nikolitsa Nomikou
n.nomikou@ucl.ac.uk

¹ Division of Surgery and Interventional Science, Faculty of Medical Sciences, University College London, London, UK

² Biomedical Sciences Research Institute, Ulster University, Coleraine, UK

³ Nanomerics Ltd, London, UK

Fig. 5 Sonodynamic treatment of T110299 tumours. **A** % cell viability of T110299 cells treated in the absence (no HPNP) and the presence of nanoparticles (HPNP), without (no US) and with ultrasound exposure at 3 W/cm² and 50% DC, for 30 s, at normoxic and hypoxic conditions. **B** In vivo treatment protocol. **C** Plot of % change of target and off target tumour volumes treated with no treatment (untreated), ultrasound only (US), nanoparticles carrying hematoporphyrin (HPNP) and nanoparticles carrying hematoporphyrin with ultrasound, i.e. sonodynamic therapy, SDT, (HPNPs + US). **D** Plot of % change of target and off-target tumour volumes treated with SDT. **E** The corresponding animal body weight increase. Statistical significance was computed using Two-way ANOVA with Bonferroni post-test (A) and One-way ANOVA with Tukey multiple comparison test (C) (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$). For A: the asterisks show the significance of difference between samples incubated in the presence and the absence of nanoparticles, under ultrasound exposure. Error bars represent \pm the SD, where $n = 5$



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will

need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.