

## Response to the reviewer's comments

### Response to Reviewer #1

1. To be a beautiful review, pay attention to some details in the paper format, such as the size and font in Figures, table standardization, etc. Such as Figure 1, Figure 2, Figure 3, and Table 1.

**Response:** Thanks for the advice. All the fonts and size in the figures and tables have been unified with the Palatino Linotype font of MDPI journals.

2. The review picture and table are too single, and lack contrast and richness, please enrich the polymer in the electrospinning film, the drug loaded on the electrospinning film, therapeutic effects, and other related pictures.

**Response:** Thanks for the advice. An extra figure depicting the abovementioned aspects was put into the article as **figure 3 (Page 7, Line 284)**.

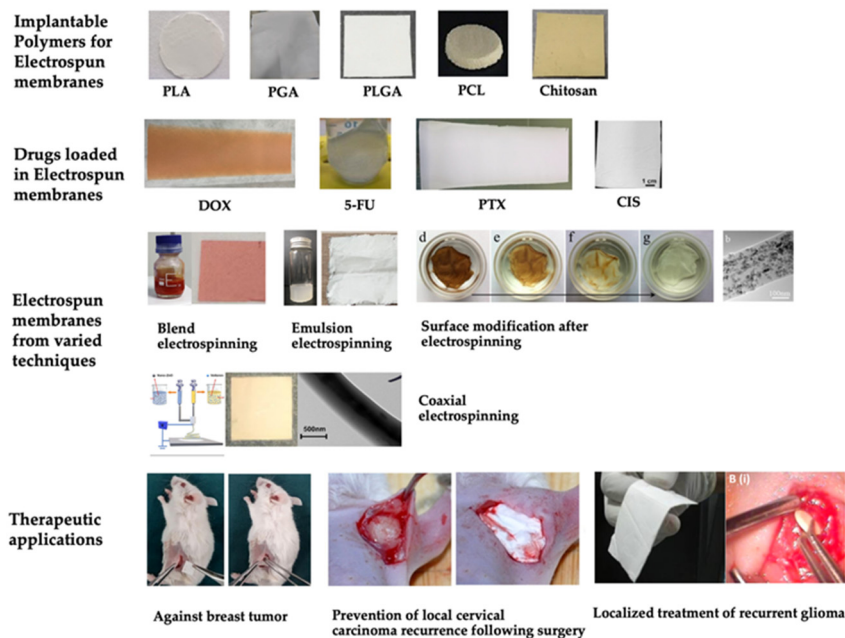


**Figure 3.** Examples of electrospun membranes fabricated with varied implantable polymeric materials (PLA[85], PGA, PLGA[86], PCL[87], chitosan[86]), loaded drugs (DOX, 5-FU[88], Paclitaxel (PTX), Cisplatin (CIS)[72]), techniques (blend electrospinning, emulsion electrospinning[89], coaxial electrospinning[90], surface modification[91]) and therapeutic applications (electrospun piperine loaded PCL against breast tumor[92], electrospun oxaliplatin

loaded PLLA preventing lo-cal cervical carcinoma recurrence[93], electrospun temozolomide loaded PLGA-PLA-PCL for localized treatment of recurrent glioma[94]). Images are re-printed with copyright permissions or under the Creative Commons CC-BY license.

**3. Four typical polymers are mentioned, and it is suggested that a table be provided to discuss the similarities and differences between the four polymers themselves and with other polymers.**

**Response:** Thanks for the advice. An extra table comparing varied polymers discussed was put into the article as **table 1 (Page 5, Line 205)**.

**4. How is the clinical translation of the chemotherapy drug-loaded electrospun membranes? How many products are under clinical translation?**

**Response:** Thanks for the reviewer's professional suggestions. We searched the relevant content carefully. Unfortunately, there are not yet any FDA-approved products of electrospun chemo-drug-loaded membranes on the U.S. market. There were currently two electrospun material products listed on the clinical trial database of the U.S. national institute of health. One is an antibacterial electrospun material loaded with ciprofloxacin (CIP), metronidazole (MET), and minocycline (MINO) for immature necrotic teeth. The other is a tissue repair scaffold for treating dermatologic wounds created by the surgical removal of non-melanoma skin cancers. Hopefully, there will be chemo-drug-loaded electrospun material products for clinical trials against local carcinoma. This extra explanation was arranged in the therapeutic effects section to discuss clinical trial stage chemo-drug loaded electrospun membranes.

**5. Some related research about drug delivery polymers should be cited to highlight the potential applications of these materials. Biomolecules 2022, 12, 636.; Biomater. Sci., 2022,10, 5369-5390**

**Response:** Yes, we found these articles helpful to increase the robustness of the introduction part and cited them in **references #3, and #4 (Page 1, Line 45)**.

Besides these routine procedures, drug-loaded hydrogels, electrospun membranes, and other in situ

delivery systems also have great potential against local carcinoma since they are excellent in local tissue adhesion with high porosity that facilitate drug delivery and cell attachments[3,4].

3. Tang, Y.; Varyambath, A.; Ding, Y.; Chen, B.; Huang, X.; Zhang, Y.; Yu, D.-g.; Kim, I.; Song, W. Porous organic polymers for drug delivery: hierarchical pore structures, variable morphologies, and biological properties. *Biomater Sci-Uk* 2022, 10, 5369-5390, doi:10.1039/D2BM00719C.

4. Zhang, Y.; Song, W.; Lu, Y.; Xu, Y.; Wang, C.; Yu, D.-G.; Kim, I. Recent Advances in Poly(&alpha;-L-glutamic acid)-Based Nanomaterials for Drug Delivery. *Biomolecules* 2022, 12, doi:10.3390/biom12050636.