# Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: doi:10.31222/osf.io/9sm4x.). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.

## Materials

| Antibodies | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| For commercial reagents, provide supplier name, catalogue number and RRID, if available. | Methods (page 6, Para 2 and 3/line 135-143)<br>Plasma collected using heparin containing tubes (Cat NO: 367878 Becton Dickinson, New Jersey, USA).<br>PGRN was analyzed using ELISA assays (Cat NO: DPGRN0, R&D Systems, Minneapolis, USA). | |

| Cell materials | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| **Cell lines:** Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID | No cell lines were used in this study. | N/A |
| **Primary cultures:** Provide species, strain, sex of origin, genetic modification | No cell lines or strains were used in this study. | N/A |

| Experimental animals | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| **Laboratory animals:** Provide species, strain, sex, age, genetic modification status. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID | No laboratory animals were used in this study. | N/A |
| **Animal observed in or captured from the field:** Provide species, sex and age where possible | No laboratory animals were used in this study. | N/A |
| **Model organisms:** Provide Accession number in repository (where relevant) | No laboratory animals were used in this study. | N/A |

| Plants and microbes | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| **Plants:** provide species and strain, unique accession number if available, and source (including location for collected wild | No plants were used in this study. | N/A |
| **Microbes:** provide species and strain, unique accession number if available, | No microbes were used in this study. | N/A |

| Human research participants | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | Methods (page 5, Para 2/line 111-119), (page 14, para 3, line 312-319)<br>Institutional Review Board of the Mount Sinai School of Medicine, New York; IRB reference NO: GCO1: 16-2619 and Institutional Review Board of the Columbia university medical center, New York; IRB reference NO: AAAA4473. | |
| Provide statement confirming informed consent obtained from study participants. | page 5, Para 2/line 111-120), and page 14, para 3, line 312-319)<br>Informed written consent was obtained from all colorectal cancer patients who were enrolled in an IRB approved data/plasma bank and all patients consented to analysis, present and to publish the paper. | |
| Report on age and sex for all study participants. | Results (page 8, Para 2/line 168-169-and Table 1<br>A total of 93 eligible CRC patients who underwent MICR were selected for the study. There were 50 males and 43 females with a mean age of 66.3± 13.2 years. | |

## Design

| Study protocol | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| For clinical trials, provide the trial registration number **OR** cite DOI in manuscript. | This study is not a clinical trail | |

| Laboratory protocol | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| Provide DOI or other citation details if detailed step-by-step protocols are available. | Method (page 6 Para 2/line 132-138 and (page 6 Para 3/line 139-143)<br>Analysis protocol described in method section | |

| Experimental study design (statistics details) | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| State whether and how the following have been done**, or** if they were not carried out. | | |
| Sample size determination | Results (Page8,Para 1/line 168-169 and table 1) | |
| Randomisation | The study was a prospective study. | |
| Blinding | The study was a prospective study. | |
| Inclusion/exclusion criteria | Method (page 6 Para 1/line 123-128) | |

| Sample definition and in-laboratory replication | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| State number of times the experiment was replicated in laboratory | Method (page 6, Para 3/line 139-143)<br>Plasma PGRN levels were determined in duplicate and 8 serial dilution standard curve samples were included on each 96 well plate; the results are reported as pg/ml. | |
| Define whether data describe technical or biological replicates | Method (page 2, Para 2/line 46-51), (page 6-7 Para 3/line 139-143).The date use is Median and CI values of duplicated biological sample vales. | |

| Ethics | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | **Ethics approval and consent to participate** Methods (page 5, Para 2/line 111-119), (page 14, para 3, line 311-319).<br>All consented preoperatively to participate in the Mount Sinai West Colorectal service's IRB-approved general tissue and data banking protocol (NO: GCO1: 16-2619-Institutional Review Board of the Mount Sinai School of Medicine, New York; and IRB reference NO: AAAA4473-Institutional Review Board of the Columbia University Medical Center, New York). | |
| Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval. | No animal or animal tissues used in this study | |
| Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required, explain why. | No animal or animal tissues used in this study | |

| Dual Use Research of Concern (DURC) | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| If study is subject to dual use research of concern, state the authority granting approval and reference number for the regulatory approval | Not applicable- This study is not subject to dual use research | |

## Analysis

| Attrition | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance. | No samples or data points were excluded | |

| Statistics | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| Describe statistical tests used and justify choice of tests. | Method (page 7, Para 1/line 145-166)<br><br>Continuous random variables such as age, surgical time, length of stay, surgical incision size of group was presented as mean and SD whereas frequencies and percentages were determined for categorical variables. Blood samples collected at postoperative time points were collected during postoperative follow-up visits and as such the late specimens were spread out over a 3-4 week period. The late samples were bundled into 7 day time blocks (POD 7-13, POD 14-20, POD 21-27, and POD 28-34) and were considered as single time points for the statistical data analysis. Since preoperative and corresponding postoperative PGRN values were not normally distributed at later time points, the comparison of PGRN values for the Preop vs. Postoperative time points was performed with the use of non-parametric test (Wilcoxon signed rank paired) and outcome data were reported as Median and CI values. Preoperative vs Postoperative comparison data is depicted in a bar graph showing PGRN levels as median and 75% quartile range. The graph exhibits (Figure :1) the difference of preop vs post-operative PGRN level at each time points. Nonparametric Mann and Whitney test was used to compare male vs female subgroups values, advancing cancer stage subgroup values, hand assisted procedure subgroup preop and post op values vs laparoscopy assisted procedure subgroup preop and post op values, because comparisons were done between different groups and numbers(n) of each group were small. Correlation between postoperative plasma PGRN levels and age and length of surgery was evaluated by the Spearman's rank correlation coefficient (rs). A p value of $p<0.05$ was used as statistically significant. All data analysis was performed using SPSS version 15.0 (SPSS, Inc., Chicago IL). | |

| Data Availability | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| State whether newly created datasets are available, including protocols for access or restriction on access. | No newly created datasets are available. | |
| If data are publicly available, provide accession number in repository or DOI or URL. | Not applicable | |
| If publicly available data are reused, provide accession number in repository or DOI or URL, where possible. | Not applicable | |

| Code Availability | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| For all newly generated code and software essential for replicating the main findings of the study: | Not applicable No codes were generated. | |
| State whether the code or software is available. | Not applicable | |
| If code is publicly available, provide accession number in repository, or DOI or URL. | Not applicable | |

## Reporting

| Adherence to community standards | Yes (indicate where provided: section/paragraph) | n/a |
|---|---|---|
| MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR. | | |
| State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript. | ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication. | |

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*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version.