1. **Basic information**
   1. Professional titles, academic titles, and administrative titles are gathered from official hospital websites.
   2. Professional association information is gathered from the national society institute and its official website.
   3. Fudan specialty rank data is from Fudan University’s Hospital Management Institute.
2. **Papers and clinical trials analysis**
   1. Papers analysis is based on number of KOL published papers, including data on first author or corresponding author, highest impact factor (IF), and average IF.
   2. Analysis of KOL’s annual paper count and IF trends.
   3. Analysis of clinical trials, including participation in MRCTs, principal investigator (PI), and phase distribution by year.
3. **Therapeutic area analysis**

Therapeutic area analysis is based on US National Library of Medicine Medical Subject Headings (MeSH), and excludes symptomatic diseases.

1. **Network analysis**

Relationship network mapping by region and top-10 collaborators.

* 1. Legends of network chart:
     1. Length of lines between researchers reflects relationships, with greater proximity reflecting higher frequency of cooperation on papers or trials.
     2. Bubble size reflects a researcher's activity, such as paper output or trial participation.
     3. Width of lines between researchers reflects IF of collaborative papers.
     4. Bubble colors reflect different research institutions.
  2. Analysis method:
     1. Strength of relationships calculated by:
        1. Collaborative papers count
        2. Collaborative papers highest IF
        3. Collaborative papers count as first or corresponding author
        4. Collaborative papers IF as first or corresponding author
     2. Researcher's activity calculated by:
        1. KOL’s total papers count
        2. KOL’s papers as first or responding author