

Recent trends in open access publishing practices vs traditional model in cardiovascular sciences

Research questions:

how much is the emergence of new national actors accompanied by the expansion of the different open access publishing models (gold, hybrid and green)? What is the impact on scientific quality of the new publishing strategies?

Information sources:

Web of Science for scientometric analysis of publication practices

Norwegian Register for Scientific Journals (NRSJ), which classifies journals into 3 levels of scientific quality based on expert opinion

OA publishing models:

Gold: publication of articles in open access scientific journals under a Creative Commons or similar license that allows the free flow and reuse of the knowledge contained in the publications.

Hybrid: publication of articles in traditional journals on a subscription basis but whose license changes to an open access one in exchange for an article processing charge

Green: The practice of self-archiving articles in repositories for free dissemination and use.

NRSJ Levels:

Level 0: journals whose publications are not considered scientific and therefore are not considered in the evaluations of the Norwegian Ministry of Education and Research

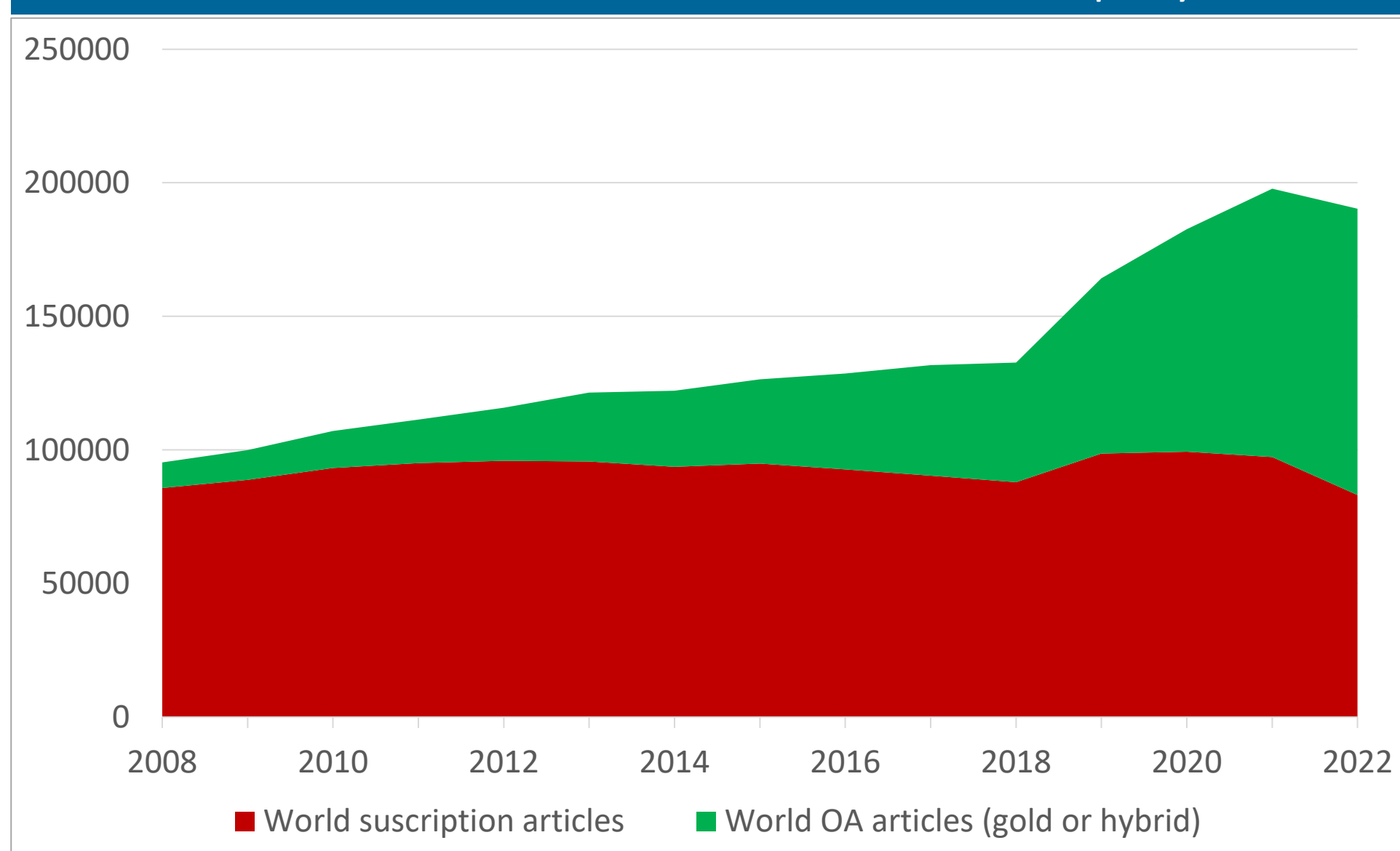
Level 1: journals that meet the minimum requirements to be considered scientific

Level 2: the highest rating assigned to a journal based on the nomination of the scientific panels of the National Board of Scholarly Publishing.

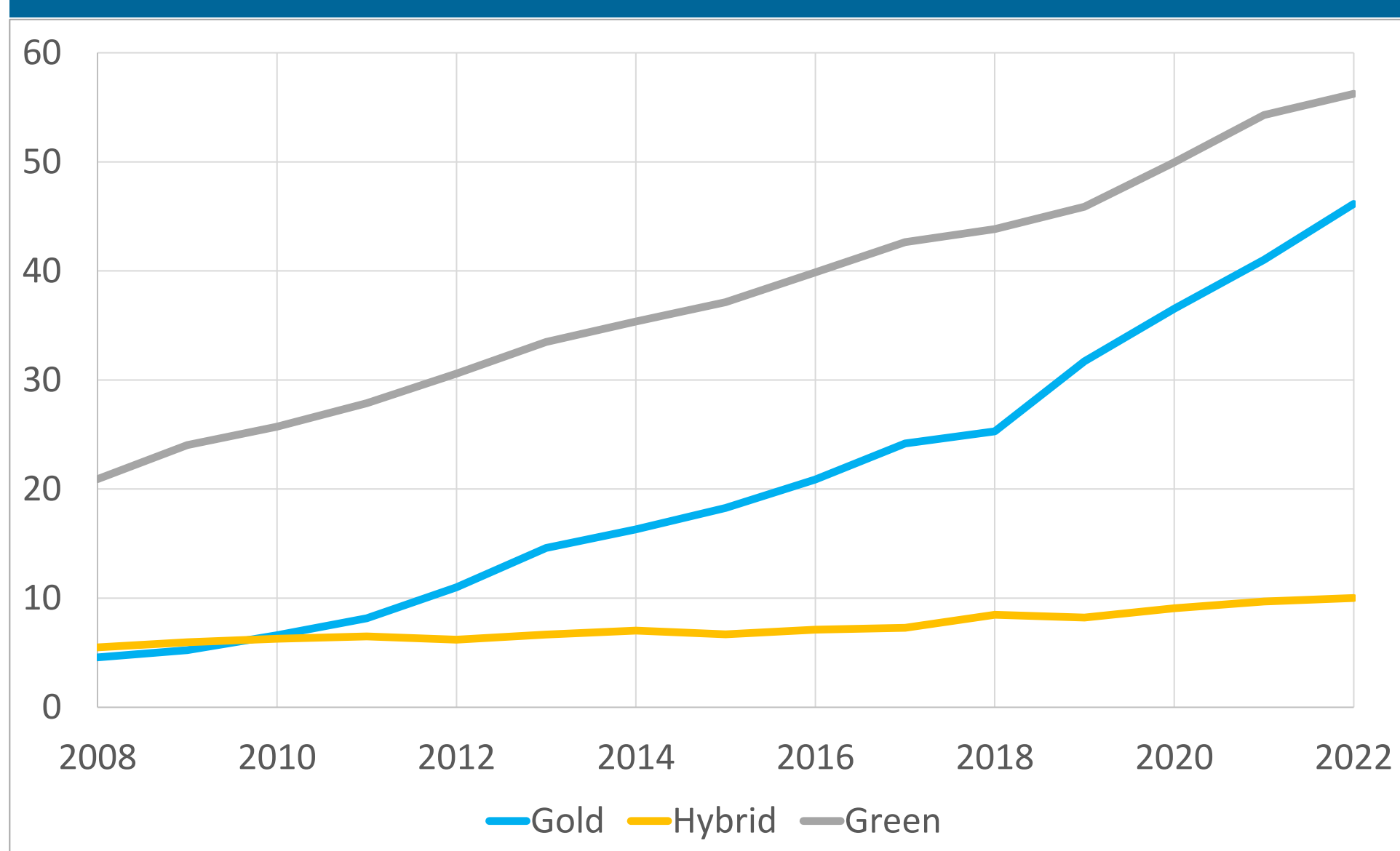
Main discoveries:

- Countries with highest production of articles show a significant growth in their percentage of gold and green OA articles, regardless of their status as traditional leaders or emerging actors.
- The US shows a consolidated practice of self-archiving and a comparatively lower growth of gold OA articles, publishing mostly in high quality journals.
- China shows an initial reduced self-archiving practice while subsequent growth is driven by the accelerated growth of gold OA publishing in poor quality journals.
- Canada, Germany, Italy and the UK show a preponderance in the practice of self-archiving and a lower growth in gold open access articles. These countries publish their results in journals of high scientific quality.
- The evolution of Japan is like China but shows an intermediate scientific quality of its top journals.
- India and Iran show slow growth in OA practices between 2008 and 2018 with accelerated growth in recent years with India publishing in low quality journals, while Iran publish journals of intermediate quality.

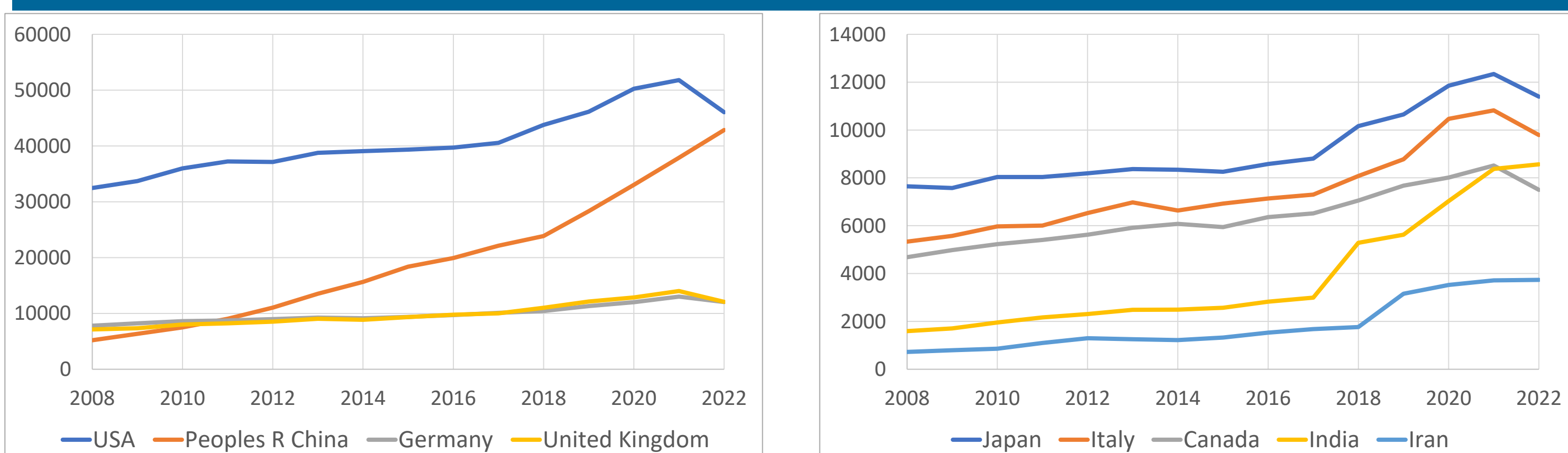
Contribution of gold and hybrid open access to the total growth of cardiovascular research in number of articles per year



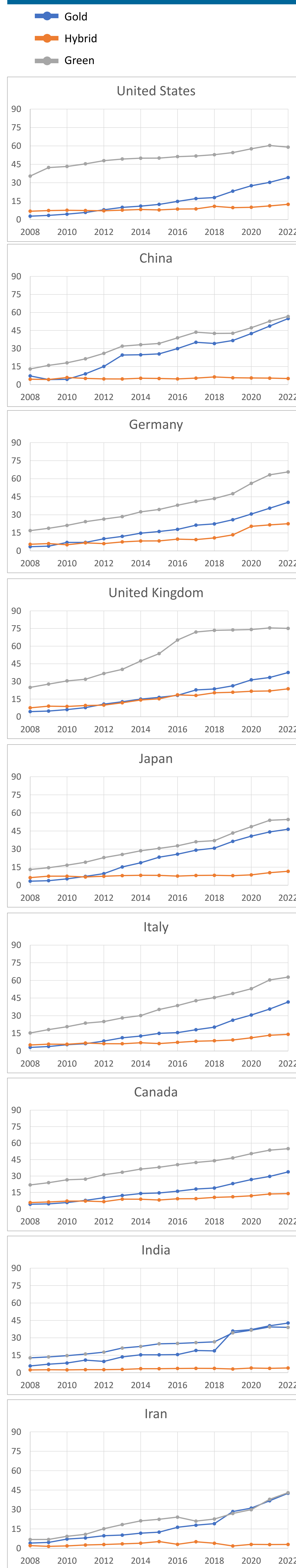
Percentage evolution of open access publishing practices in the world



Evolution of countries in terms of annual number of cardiovascular articles



Percentage evolution of open access publishing practices in the countries analyzed



Top 10 journals by number of cardiovascular research articles for each country

