Galápagos

JAK to the future:
a patient-centric choice in UC
Satellite symposium at UEG Week 2022

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In person and online
Monday 10 October 2022
12:30–13:30 CEST

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August 2022 | GL-IBD-NA-202205-00001
Search engine optimization for scientific publications: How one can find your needle in the haystack

WHAT IS SEARCH ENGINE OPTIMIZATION (SEO) AND WHY IS IT IMPORTANT?

Since the introduction of the Internet there has been a massive improvement of connections between scientists, patients, stakeholders and other persons interested in scientific publications. With the development of web 2.0, global connections and the rise of social media platforms such as Twitter, Instagram, Facebook and others, there has been a tremendous amount of data published with unimaginable large numbers of exabytes. With this, search engines such as Google have been playing a very important role in finding the relevant information you need on the Internet. Next to the production of general data, there has also been a major increase in the production and publications of scientific data, which has been estimated to cover approximately 50 million scientific papers up till 2009 since the year 1665, and additionally, this pool of scientific papers is currently growing with >7.5 million each year. Moreover, there is a growing number of publications each year with an accompanying growth in the number of scientific journals. Still, when adjusted for a stable number of scientific journals, the number of publication per journal per year keeps rising. It is no surprise that this gigantic and incomprehensible number of scientific papers need to be tracked down and found in the right way. At this point, approximately 53% of the traffic to scientific websites such as Wiley, come from search engines. One does not need to be a scientist to understand that only if you can (easily) get found, you can get read, shared and eventually cited. To be able to get found, you need to tag and optimize your paper the right way so search engines such as Google can correctly index the paper and lead interested persons to the right papers. As an author, or as a journal, you want people to find your article better than anyone else. This is what Search engine optimisation (SEO) is about.

HOW TO OPTIMIZE YOUR SCIENTIFIC MANUSCRIPT FOR SEARCH ENGINES

The general rules for SEO can be found on the Wiley website as well as in some of the online published webinars. Also, there are an abundance of websites on SEO, but not specifically on scientific publications. Nevertheless, we will lay out the general rules for SEO here by combining the information from the website and the webinars form the Wiley website. At the United European Gastroenterology journal, we have a team of trainee-editors who will perform SEO on each article title/abstract/keywords, but not on the full manuscript. In the article by Rodriguez-Lago et al., the production process is further described. When following the below steps, this would ease the SEO process further.

Rule number 1: Think about important keywords that describe your article

This rule has been under-highlighted and is not being given the attention it deserves. It is pivotal to select keywords that are consistently used in your area of expertise, where it is important that the “keywords” are more short “key phrases” rather than single words. When submitting a manuscript, in general authors can select up to 10 attributes. Most of the editorial manager programs provide with a list of keywords. (See Box 1) However, these keywords are too generic and do not take the articles in the right way, and do generally not capture the contents of the article. Therefore, be creative and put in yourself at least 5-7 keywords. Be advised that these are the keywords that are being used to tag your paper for online use. If uncertain, first perform a search using the keywords and observe the number of hits. The larger the number, the more often it is being used for your specific area. Another way of finding specific keywords could

Box 1 Use specific, and not too general keywords:

- Title: Gallbladder polyps growth rate is an independent risk factor for neoplastic polyps
- Too general keywords: ultrasound, cancer risk, gall stones, bile, gastroenterology.
- Specific keywords: gallbladder cancer risk, polyp growth rate, gallbladder polyp, neoplastic polyps.
be through Google Trends or Google Adwords, albeit these are more
dedicated to commercial companies rather than scientific
publications.

Rule number 2: Keep your title search engine friendly—Short and simple

The most important issue for search engines to index your article is
about the length of the title. If the title is too long, search engines will
dislike this and this will eventually lead to your article not being
found. It is very important to have the most important 1-2 keywords
within the first 65 characters of the title, especially so your area of
interest is directly highlighted. In Box 2, we show an example of the
optimization of a title. Moreover, try to describe the contents of your
article briefly (e.g., use conclusions) and keep it simple.

Rule number 3: Optimize your abstract

Search engines will generally show the first 2 sentences of an ab-
stract. This means that essential keywords must be provided in the
first 2 sentences. For some scientific areas this could also mean that
the conclusion is already in the first 2 sentences, albeit this a rather
seldom observation. Throughout the abstract, repeat keywords 3–6
times but avoid ‘keyword stuffing’. In case of the latter over-
emphasis, search engines may un-index the article making it less
well findable.

Rule number 4: Use your important keywords throughout the article

As a general rule of thumb, one could use 1-2 keywords in the
title, 2–3 (up to 6) in the abstract, and add at least 5-7 key-
words attached to your article. Moreover, it is recommended to
put keywords in subheadings, as subheadings are being regarded as
a structure of an article and therefore tip-off search engine
indexing. You can repeat your keyword throughout the abstract if
you have only limited number of specific keyword but do not
exaggerate.

Rule number 5: Be consistent throughout the article

Refer to author names and initials in a consistent manner
throughout the paper. Do not use a lot of variations of your key-
words. Be consistent with any previous publications. Do not come
up with never used abbreviations no one (and no search engine)
knows about.

Rule number 6: Build links

It is vital to have your article produced across social media, networks,
institutional sites and endorsement through colleagues. It is not al-
ways about the quantity but it is especially important if persons that
are highly respected by the field, endorse your paper. This will also
tip off search engines and improve your articles visibility online. The
more links from respected individuals or trusted sites, the more
powerful the effect.

CONCLUSIONS

Search Engine Optimization (SEO) is becoming more and more
important in the era of web 2.0 and the emerging role of social
media in the scientific community. In order to get shared and get
cited, your article must first be found. This could be achieved by
following some easy steps to optimize a scientific manuscript for
search engines. Writers and editors should focus on simple and
short titles and abstract and use appropriate specific keywords
known in the scientific field, and use these consistently throughout
the article.
KEYWORDS
article findability, guidance on SEO, improvement of citations, scientific publications, scientific SEO, search engine optimization, SEO

CONFLICT OF INTEREST
The authors have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT
Data sharing not applicable—no new data generated, or the article describes entirely theoretical research.

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REFERENCES