SWAN - Scientific Writing Assistant v. 1.18   Fri Feb 28 22:36:58 CST 2020

Evaluation for "Novel Molecular Targets in Hepatocellular Carcinoma"

Title

Results for title evaluation:

(+) Your title is clear.

(?) There also seems to be a disconnection between your title and your abstract thereby making it difficult for the non expert reader to follow you.
Either your abstract does not tell the full story of your title, or you use synonyms thereby making it difficult for the non expert reader to follow you. Examine how close the title fits with the abstract. Following word(s)

- Novel

should be also found in your abstract since they have title status, i.e, the most important words in your paper.

(?) With 0 search keywords, your title is difficult to find. You should have search keywords in your title.

(?) You have chosen not to answer the following question(s):

- *the What*, standing for the contribution of your paper.
- *the What For*, standing for the application of your paper.
- *the How*, standing for the methodology used in your paper.
- *the So What*, standing for the impact of your paper.

Ask yourself whether answering such questions in the title is feasible. Your title may already feel long and you may not want to add more keywords. But could you consider replacing details either too specific or too generic with keywords that answer more reader questions? On the other hand, your title may already be short and readable. Yet, if it remains readable after adding keywords to answer more reader questions, then by all means, do so. Your title would become more attractive, or useful, or explicit, or easier to find! And remember, a readable title is one that is read and understood by non-experts in one reading, without ever having to re-read parts of it for clearer understanding. Why? Because readers scan titles in lists containing many titles, and they rarely stop to re-read anything while scanning. A great title answers many reader questions in fewer words.

Evaluated title:

You will find words highlighted in your title.

- Attractive words: green
- Words reflecting contribution: <u>underlined</u>
- Words used for intermediary search: blue
- Words used for expert search: purple

Novel Molecular Targets in Hepatocellular Carcinoma

Abstract

Results for abstract evaluation:

(+) You have made a good choice when deciding to use the present tense only for your abstract.

(?) You have words in your title that are not used in your abstract.

- novel

Why not? These title keywords are representative of your contribution. Your abstract simply expands on the story of the title, not by repeating it, but by developing it. Including the same title keywords the reader found interesting gives the reader confidence that your title and your abstract tell the same story.

It may be that your abstract contains synonyms of your title keywords, not the keywords themselves. If so, remove the synonyms. They confuse the non-expert reader unable to understand the similarity. Choose your title keywords carefully and then use them consistently throughout the paper.

But it may also be that these title keywords missing in your abstract were not essential and could safely be removed from your title.

(?) Although adjectives are short cuts to general qualities of the contribution and are attractive in a title, they should be rare in the abstract because they lack the precision required to convince some readers the paper is worth reading.

Here are the adjectives found in your abstract
- Hepatocellular
- cancer-related
- therapeutic
- locoregional
- systemic
- advanced
- low
- poor
- new
- molecular
- targeted
- overall
- sorafenib
- essential
- effective
- Recent
- polo-like
- Plk1
- arginine
- Glypican-3
- potential
- monotherapy
- limited
- due
- Future
- ideal

(?) You have keywords (not presented in your title) that appear at least twice in your abstract.

- hcc
- therapy
- development
- pathways

Should they also be present in your title? Do you need to rewrite your title so that it reflects better the contents of your abstract?

(!) Hint: you can get more comments on your Abstract by highlighting the sentences in your abstract that describe background, main research objective, methodology, contribution and impact of the research. You can do this by following the instructions in the Abstract text window where you inserted the text of your abstract.

Evaluated abstract:

No highlightings were needed to do to this section.

Introduction

Results for introduction evaluation:

(+) Your introduction has a good length, and is helpful to the reader.

(?) You do not use the large reader appeal visuals have on the reader.
Describing your problem or hypothesis visually is certainly more convincing than doing it with words only. See whether you can enhance the attractivity of your paper as well as be more convincing through a visual.

(?) Your lack of personal pronouns usage may get your introduction to feel impersonal.
It does not tell the personal story of what motivated you to conduct the research that led to your contribution. It could even be a

misleading story because the reader (and reviewer) may believe you are responsible for some prior art that actually is the work of others, or vice versa.

(?) Current number of passive sentences (10) in the introduction can make it feel more dull.
It needs to be rewritten so that the active voice is truly prevalent.

(?) You will find words that have been colored orange in your introduction. These words, also called wiggle words and hedge words are imprecise. Sometimes rightly so. For example you may have immediately removed the imprecision by following the word with specific examples or references. Hedge words are fine also when they help you inform the reader of your level of confidence in a suggestion you make, or a fact you report. However, in the introduction of a paper, the reader wants to see the expert in you, not a scientist who lacks precision because of lack of knowledge or simply lack of time to find out the facts from the literature. Remove the unnecessary hedge words, and watch how much more authoritative your text becomes!
In particular, the auxiliary "can" is used incorrectly when stating a fact, and not a possibility. An expert knows with precision. An expert reads the whole paper, not just the abstract of the papers cited. Therefore, when experts used hedge words, these words have not had their meaning diluted by misuse, and they convey intellectual honesty as well as expertise. To become more authoritative in your writing, read more than the abstracts of the related works you mention. Read the whole papers. Research limitations are not mentioned in abstracts, but in the conclusion or in the discussion sections of their papers.

(?) Your introduction contains words that have been colored red. These words are judgmental.
These words are dangerous when used in the context of a comparison between your work and the work of others. Look carefully at each of these words. They make claims. But as scientist, you know that a claim has to be justified. Are you able to justify these claims on objective grounds? If not, I recommend that you remove the judgmental aspect of these words or remove them altogether.

(?) You will find that words have been colored dark blue in your introduction. These words are dangerous because they claim the absolute, the extreme, the certain.
In science, these claims are short lived. See whether these overstatements are justified from a scientific perspective. If they are, keep them, if not, simply remove them or - but only in last recourse - replace them with an appropriate hedge word.

(?) Consider the words that have been colored yellow. They are called "transition words".
Writers use these words when they feel that they are jumping from one topic to another without a proper bridge or transition. These are tell-tale signs that the fluidity of the text is low. See if you are able to remove these transition words by restoring proper text progression, for example by making sure that the topic of successive sentences remains the same or by starting a sentence with words found at the end of the previous sentence, or with the noun form of the main verb of the previous sentence.

(?) Your introduction does not make use of the greatest means of attracting and sustaining the attention of the reader: questions.
The most important question of your paper, is the question to which your contribution is the answer. Ask that question early in your introduction. And do not neglect the use of questions in the rest of your paper, at the end of a paragraph of heading to prepare the reader to what comes next, or at the beginning of a paragraph in which, of course, the answer will be revealed.

(?) Your sentences are, on average, quite long: 24 words per sentence on average.
Reading could be slow, and the reader probably struggles to generate expectations as to what comes next after reading a particularly long sentence.

(?) You have long sentence(s) (over 40 words) in your introduction.
List of long sentences:

- The most common cause of HCC is the infection with hepatitis B virus (HBV) or hepatitis C virus (HCV) which accounts for a total of about 92% of HCC cases in developing countries and about 43% of HCC cases in developed countries . (length 42 words)
- Sorafenib is the first orally available multikinase inhibitor, which targets on Raf, epidermal growth factor receptor (EGFR), vascular endothelial growth factor receptor (VEGFR), platelet-derived growth factor receptor (PDGFR), FMS-like tyrosine kinase-3 (Flt-3) and c-kit , marketed for the treatment of renal cell carcinoma and HCC. (length 44 words)

See whether the sentence(s) mentioned above are easily readable or possibly confusing.
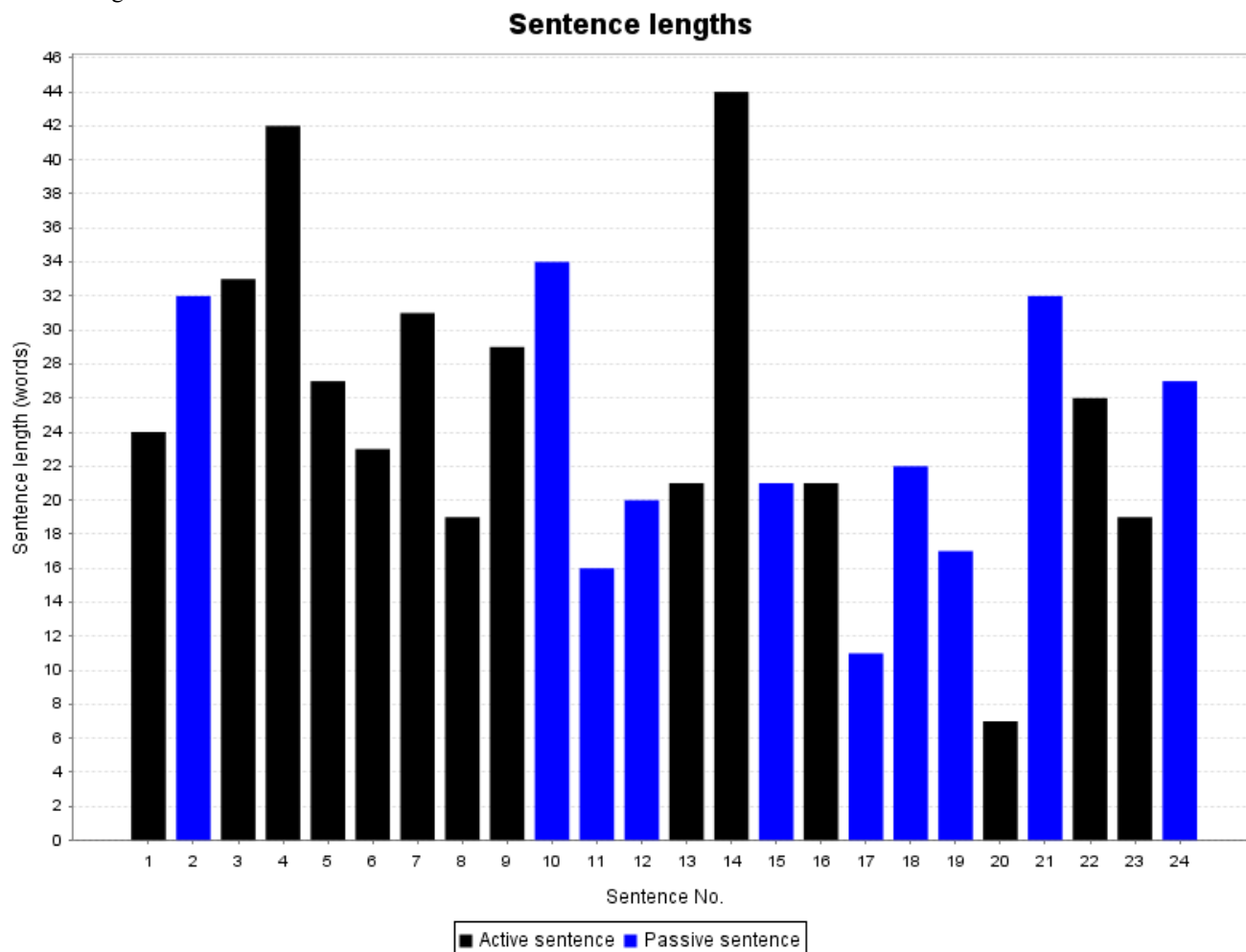
Evaluated introduction:

You will find words highlighted in your text.
- Imprecise words: orange
- Overstatements: dark blue
- Judgmental words: red
- "Transition words": yellow
- Passive sentences: blue

Liver cancer is the sixth commonly diagnosed cancer with poor prognosis worldwide and hepatocellular carcinoma (HCC) is the most common type of liver cancers. According to the global cancer statistics 2018, it is estimated that liver cancer contribute to 4.7 % and 8.2% of total number of new cancer cases and total number of cancer-related death, respectively . HCC patients also have poor outcome as they have an inferior 5-year overall survival of 18% as compared with that of other common cancers including breast (90%), colon (65%) and prostate (98%) cancers . The most common cause of HCC is the infection with hepatitis B virus

(HBV) or hepatitis C virus (HCV) which accounts for a total of about 92% of HCC cases in developing countries and about 43% of HCC cases in developed countries . In countries endemic for HBV, the introduction of the universal infant hepatitis vaccination program helps to reduce the rate of HBV-induced HCC in children and young adult . Other risk factors of hepatocarcinogenesis include aflatoxin B1 consumption, alcoholic liver disease, non-alcoholic fatty liver disease, smoking, autoimmune hepatitis, hemochromatosis, obesity and diabetes. Patients with early HCC are always non-symptomatic or develop nonspecific complaints such as abdominal pain, enlarged abdomen, jaundice and weight loss, which makes the diagnosis of HCC often at late stage. Surveillance of HCC, by the evaluation of serum £\-fetoprotein (AFP) and abdominal ultrasonography, in high risk group is therefore important . Locoregional treatments of HCC include surgical resection, orthotopic liver transplantation, percutaneous ethanol injection (PEI), radiofrequency ablation (RFA), radioembolization with yttrium-90 and transarterial embolization with (TACE) or without (TAE) chemotherapy . Although a 5-year survival rate of 50-75% of the HCC patients can be achieved, these curative and effective therapies are only restricted to patients with early stage HCC and induce high recurrence rate [7-12]. Neoadjuvant and adjuvant systemic therapies are required to reduce the rate of recurrence or extrahepatic metastasis. However, systemic chemotherapy for HCC patients have a low tumor response rate and is associated with development of chemoresistance [13-16]. Recent advances on cancer research of HCC lead to a new era of molecular targeted therapy towards several important signaling pathways. Sorafenib is the first orally available multikinase inhibitor, which targets on Raf, epidermal growth factor receptor (EGFR), vascular endothelial growth factor receptor (VEGFR), platelet-derived growth factor receptor (PDGFR), FMS-like tyrosine kinase-3 (Flt-3) and c-kit , marketed for the treatment of renal cell carcinoma and HCC. Sorafenib treatment was found to be effective in inhibiting tumor growth and angiogenesis in HCC by two large-scale, randomized, placebo-controlled studies . However, the median overall survival and the time to radiologic progression are only 3 months longer in the sorafenib treatment group. In addition, intrinsic or acquired resistance towards sorafenib treatment was found. With long term exposure of HCC cells to sorafenib, acquired sorafenib resistance is developed, which activates the phosphoinositide 3-kinase (PI3K)/AKT pathway . In addition to sorafenib, other molecular targeting drugs have been applied for the treatment of advanced HCC. These drugs include lenvatinib, regorafenib, and cabozantinib. Lenvatinib is recommended as a first-line therapeutic drug for the treatment of patients with advanced HCC while regorafenib and cabozantinib are recommended as a second-line treatment in the presence of sorafenib resistance. These molecular targeting drugs are tyrosine kinase inhibitors and advanced HCC patients treated with these inhibitors have better overall survival benefit than that with sorafenib [21-24]. Therefore, it is still important to develop novel therapeutic compounds with high efficacy especially in recurred and metastatic HCC. In this article, we will review some of the novel molecular targets in HCC and the future development of personalized molecular targeted therapies will also be discussed.

Sentence lengths:

Conclusions

Results for conclusions evaluation:

(?) Your concluding statements are shorter than your abstract.
A complete conclusion should at least be as long as the abstract. It should not only restate the main contribution results. It should present the main outcome of the research and present all secondary results that may be of use to the reader and suggest their potential application to the reader. It also should re-presents the limitations of the work and suggest ways to address these in the future.

(?) The majority of verbs in a conclusion should be conjugated in the past tense.
It does not seem to be the case in your conclusion. However, if you are stating proven facts, the use of the present tense is fine. Check whether you are using the appropriate tense.

(?) Your conclusion contains words that have been highlighted with orange. These words are verbs that are in present tense.
The majority of verbs in a conclusion should be conjugated in the past tense. Check whether you are using the appropriate tenses.

Evaluated conclusions:

You will find words highlighted in your text.
- Verbs that are in present tense: orange

To date, molecular targeted therapy has become an important issue in the therapeutic strategy of HCC. Dysregulation of certain signaling pathways critical to the development of HCC can be novel molecular targets for HCC treatment. However, the limitation of monotherapy with low tumor response rate and presence of chemoresistance suggested the importance of personalized and combined molecular targeted therapy in HCC. Further studies on the finding of biomarkers and screening method indicating the most appropriate treatment for HCC patients are needed.