

Response to Drs Von Hoff and Renschler

Daniel H. Ahn and Tanios Bekaii-Saab

Received: 16 February 2017; revised manuscript accepted: 20 February 2017

Reply to Von Hoff and Renschler's Letter to the Editor re: Ahn et al. A modified regimen of biweekly gemcitabine and nab-paclitaxel in patients with metastatic pancreatic cancer is both tolerable and effective: a retrospective analysis. Ther Adv Med Oncol https://doi.org/10.1177/1758834016676011

We have reviewed with great interest the letter by Von Hoff and Renschler.¹ We disagree with many of the points raised, whereas on some we agree while emphasizing the fact that many were already discussed in our paper as limitations of our analysis. We previously discussed the multiple considerations that factored into the choice of a modified regimen of gemcitabine and nab-paclitaxel, and we refer the authors to the original manuscript for that purpose.²

There is no evidence that dose reductions or delays affect efficacy

We first note that biweekly regimens have been shown, in a number of settings, including pancreatic and colorectal cancer, to improve tolerability with no adverse impact on outcome.^{3–7}

In the MPACT trial, the combination of weekly gemcitabine and nab-paclitaxel required a large proportion of patients to undergo a dose reduction (47% for gemcitabine dose and 41% for nab-paclitaxel dose). Additionally, a recent exploratory analysis by Von Hoff and colleagues from the MPACT trial indicated that dose reductions and delays were effective at improving tolerability and did not seem to compromise treatment efficacy. In fact, the results of this analysis indicated that patients who underwent dose reductions or delays had an improved overall outcome.

Our study versus historic controls

We acknowledge that a retrospective analysis has significant limitations and is closer to a real-world observation than following the restrictive eligibility criteria of clinical trials. Early-phase trials tend to be even more restrictive and selective compared with phase III trials, which may explain the different results between the two studies listed by the authors in their letter. Additionally, in our setting, as in many large academic practices, 'best patients' are preferentially selected for either a clinical trial or a triplet regimen. As such, we believe that patients included in our retrospective analysis are more comparable with those in the MPACT trial. Supporting this further is a recent study from the British Columbia Cancer Agency showing that the majority of patients diagnosed with metastatic pancreatic cancer would never be candidates for either nab-paclitaxel/gemcitabine or FOLFIRINOX if the restrictive eligibility requirements of MPACT or PRODIGE were applied.10 This reinforces the high likelihood that our patient population reflects more closely the one included in the MPACT trial, especially given the historic similarity of the respective results. Additionally, the results from our experience with the modified biweekly gemcitabine and nab-paclitaxel regimen appear to be similar to the results of the weekly regimen, as shown in more recent studies.11

In an era of value-based care, biweekly gemcitabine and nab-paclitaxel should be considered for comparative analysis *versus* the weekly regimen

Finally, we would like to emphasize the fact that, in this palliative setting, and despite the confirmed clinical benefit from the addition of nab-paclitaxel to gemcitabine, pancreatic cancer remains a disease with a dismal outcome; the combination provided an incremental median survival benefit of only 1.8 months. ¹² In this palliative setting, in addition to cost, the impact of treatment-related toxicities on patient quality of life needs to be taken into strong consideration.

Ther Adv Med Oncol 2017, Vol. 9(6) 445–446

DOI: 10.1177/ 1758834017709238

© The Author(s), 2017. Reprints and permissions: http://www.sagepub.co.uk/ journalsPermissions.nav

Correspondence to: Tanios Bekaii-Saab Department of Medicine, Division of Hematology/ Medical Oncology, Mayo Clinic, 5777 East Mayo Clinic Boulevard, Phoenix, A7 85054. USA

bekaii-saab.tanios@mayo. edu

Daniel H. Ahn Department of

Department of Medicine, Division of Hematology/ Medical Oncology, Mayo Clinic, Phoenix, AZ, USA

journals.sagepub.com/home/tam 445



We do agree with Von Hoff and Renschler that randomized trials are required to establish standards. However, and although we understand the overall reluctance to spend additional resources to study the biweekly regimen, we disagree for all the reasons stated above that a weekly regimen would provide a superior outcome. We remain confident that the results of our study provide a very promising signal that should be considered for comparative analysis, given the cost and toxicity implications confounding the weekly regimen, especially in an era of value-based care. Additionally, biweekly regimens provide more favorable backbones on which to build in clinical trials, with the aim of continuing to improve on the modest gains observed with gemcitabine and nab-paclitaxel.

Funding

This research received no specific grant from any funding agency in the public, commercial, or notfor-profit sectors.

Conflict of interest statement

Tanios Bekaii-Saab has received consultant fees from Celgene (advisory role) Summit, New Jersey, USA.

References

- 1. Von Hoff D and Renschler M. Re: Ahn *et al.* A modified regimen of biweekly gemcitabine and nab-paclitaxel in patients with metastatic pancreatic cancer is both tolerable and effective: a retrospective analysis. *Ther Adv Med Oncol* 9: 75–82.
- Ahn DH, Krishna K, Blazer M, et al. A modified regimen of biweekly gemcitabine and nab-paclitaxel in patients with metastatic pancreatic cancer is both tolerable and effective: a retrospective analysis. Ther Adv Med Oncol 2017; 9: 75–82.
- 3. Heinemann V, Quietzsch D, Gieseler F, et al. Randomized phase III trial of gemcitabine plus cisplatin compared with gemcitabine alone in advanced pancreatic cancer. J Clin Oncol 2006; 24: 3946–3952.

- 4. Ko AH, Dito E, Schillinger B, *et al*. Phase II study of fixed dose rate gemcitabine with cisplatin for metastatic adenocarcinoma of the pancreas. *J Clin Oncol* 2006; 24: 379–385.
- Ko AH, Quivey JM, Venook AP, et al. A phase II study of fixed-dose rate gemcitabine plus low-dose cisplatin followed by consolidative chemoradiation for locally advanced pancreatic cancer. Int J Radiat Oncol Biol Phys 2007; 68: 809–816.
- 6. Poplin E, Feng Y, Berlin J, *et al.* Phase III, randomized study of gemcitabine and oxaliplatin versus gemcitabine (fixed-dose rate infusion) compared with gemcitabine (30-minute infusion) in patients with pancreatic carcinoma E6201: a trial of the Eastern Cooperative Oncology Group. *§ Clin Oncol* 2009; 27: 3778–3785.
- Fuchs CS, Marshall J, Mitchell E, et al.
 Randomized, controlled trial of irinotecan plus
 infusional, bolus, or oral fluoropyrimidines
 in first-line treatment of metastatic colorectal
 cancer: results from the BICC-C Study. J Clin
 Oncol 2007; 25: 4779–4786.
- Von Hoff DD, Ervin T, Arena FP, et al. Increased survival in pancreatic cancer with nabpaclitaxel plus gemcitabine. N Engl J Med 2013; 369: 1691–1703.
- Scheithauer W, Ramanathan RK, Moore M, et al. Dose modification and efficacy of nab-paclitaxel plus gemcitabine vs. gemcitabine for patients with metastatic pancreatic cancer: phase III MPACT trial. J Gastrointest Oncol 2016; 7: 469–478.
- Peixoto RD, Ho M, Renouf DJ, et al. Eligibility of metastatic pancreatic cancer patients for first-line palliative intent nab-paclitaxel plus gemcitabine versus FOLFIRINOX. Am J Clin Oncol. DOI: 10.1097/COC.00000000000000193
- 11. O'Reilly EM, Mahalingam D, Roach JM, *et al.*Necuparanib combined with nab-paclitaxel +
 gemcitabine in patients with metastatic pancreatic
 cancer: phase 2 results. *J Clin Oncol* 2017;
 35(Suppl. 4): abstract 370.
- Saltz LB and Bach PB. Albumin-bound paclitaxel plus gemcitabine in pancreatic cancer. N Engl J Med 2014; 370: 478.

Visit SAGE journals online journals.sagepub.com/home/tam

\$SAGE journals