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Brief Correspondence

What Experts Think About Prostate Cancer Management During the COVID-19 Pandemic: Report from the Advanced Prostate Cancer Consensus Conference 2021

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Abstract

Patients with advanced prostate cancer (APC) may be at greater risk for severe illness, hospitalisation, or death from coronavirus disease 2019 (COVID-19) due to male gender, older age, potential immunosuppressive treatments, or comorbidities. Thus, the optimal management of APC patients during the COVID-19 pandemic is complex. In October 2021, during the Advanced Prostate Cancer Consensus Conference (APCCC) 2021, the 73 voting members of the panel members discussed and voted on 13 questions on this topic that could help clinicians make treatment choices during the pandemic. There was a consensus for full COVID-19 vaccination and booster injection in APC patients. Furthermore, the voting results indicate that the expert's treatment recommendations are influenced by the vaccination status: the COVID-19 pandemic altered management of APC patients for 70% of the panellists before the vaccination was available but only for 25% of panellists for fully vaccinated patients. Most experts (71%) were less likely to use docetaxel and abiraterone in unvaccinated patients with metastatic hormone-sensitive prostate cancer. For fully vaccinated patients with high-risk localised prostate cancer, there was a consensus (77%) to follow the usual treatment schedule, whereas in unvaccinated patients, 55% of the panel members voted for deferring radiation therapy. Finally, there was a strong consensus for the use of telemedicine for monitoring APC patients.

Patient summary: In the Advanced Prostate Cancer Consensus Conference 2021, the panellists reached a consensus regarding the recommendation of the COVID-19 vaccine in prostate cancer patients and use of telemedicine for monitoring these patients.

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Cancer patients are at a higher risk of illness or death from coronavirus disease 2019 (COVID-19) [1]. Various other factors have been associated with infection severity and mortality, including male gender, older age, and pre-existing comorbidities such as diabetes or cardiopulmonary disease [2]. Since prostate cancer patients are often elderly with comorbidities, they are at a high risk of developing more severe disease and sequelae after COVID-19 infection. Furthermore, long-term androgen-deprivation therapy (ADT) as the mainstay of advanced prostate cancer (APC) treatment is known to be associated with weight gain, diabetes, and cardiovascular disease [3]. Early in the pandemic, some studies have suggested a protective effect of ADT on severe forms of COVID-19 [4]. Unfortunately, these observations have not been confirmed [5].

The Advanced Prostate Cancer Consensus Conference (APCCC) is a meeting where international experts discuss clinically relevant areas of APC treatment. For 2021, one of the topics voted on was management of APC patients throughout the different phases of the COVID-19 pandemic. In particular, in October 2021, the voting members of the panel voted on 13 questions regarding the most debated aspects on this topic (Table 1). Answer options with ≥75% agreement are considered a consensus. At the time of this meeting, "fully vaccinated" meant "after the administration of one or two doses" (depending on the COVID-19 vaccine).

Table 1 – APCCC 2021 questions concerning the COVID-19 pandemic and prostate cancer patient management.

Question	Answers	Voting results, % (*N*)
Has the COVID-19 pandemic altered your treatment selection or sequencing of treatments for patients with advanced prostate cancer before the availability of the COVID-19 vaccinations?	1. Yes	70% (50)
	2. No	30% (21)
Do you recommend COVID-19 vaccination for patients with advanced prostate cancer?	1. Yes	97% (69), **strong consensus**
	2. No	3% (2)
In fully vaccinated patients with advanced prostate cancer, has the COVID-19 pandemic impacted your management?	1. Yes	25% (18)
	2. No	75% (53), **consensus**
In the majority of patients with mHSPC who are not vaccinated, what would be your preferred systemic treatment during the active phase of the COVID-19 pandemic?	1. I am less likely to use docetaxel	43% (30)
	2. I am less likely to use abiraterone because of concomitant steroid requirement	1% (1)
	3. Both of the above	27% (19)
	4. Would not affect my choice	29% (20)
	5. Abstain	1
In the majority of patients with mHSPC who are fully vaccinated, what would be your preferred systemic treatment during the active phase of the COVID-19 pandemic?	1. Would not affect my choice	69% (49)
	2. I do not recommend docetaxel in this setting	28% (20)
	3. I recommend ADT alone	3% (2)
For chemotherapy-fit patients with PSMA imaging–positive mCRPC with no PSMA PET/CT–negative lesion who have received at least one line of AR pathway inhibitor and one line of taxane-based chemotherapy, what would be your preferred treatment option (assuming that both treatments are readily available and there is no molecular alteration with approved therapy) during the active phase of the COVID-19 pandemic for the majority of unvaccinated patients?	1. I am less likely to use cabazitaxel/prednisone	47% (33)
	2. I am less likely to use radium-223 or lutetium-PSMA	1% (1)
	3. Both of the above	11% (8)
	4. Would not affect my choice	41% (29)
For chemotherapy-fit patients with PSMA imaging–positive mCRPC with no PSMA PET/CT–negative lesion who have received at least one line of AR pathway inhibitor and one line of taxane-based chemotherapy, what would be your preferred treatment option (assuming that both treatments are readily available and there is no molecular alteration with approved therapy) during the active phase of the COVID-19 pandemic for the majority of fully vaccinated patients?	1. I am less likely to use cabazitaxel/prednisone	17% (12)
	2. I am less likely to use radium-223 or lutetium-PSMA	1% (1)
	3. Both of the above	3% (2)

Table 1 (*continued*)

Question	Answers	Voting results, % (*N*)
	4. Would not affect my choice	79% (56), **consensus**
	5. Abstain	3
For patients with high-risk localised or locally advanced prostate cancer in whom definitive radiation therapy in combination with long-term ADT is planned, how long can the radiation therapy be deferred after the initiation of ADT during the active phase of the COVID-19 pandemic for unvaccinated patients?	1. I would not change my usual treatment schedule; RT should start within 3–4 mo of starting ADT	45% (33)
	2. Defer RT up to 6 mo after the start of ADT	38% (28)
	3. Defer RT up to 12 mo after the start of ADT	16% (12)
	4. Defer RT up to 24 mo after the start of ADT	1% (1)
For patients with high-risk localised or locally advanced prostate cancer in whom definitive radiation therapy in combination with long-term ADT is planned, how long can the radiation therapy be deferred after the initiation of ADT during the active phase of the COVID-19 pandemic if the patient is fully vaccinated?	1. I would not change my usual treatment schedule; RT should start within 3–4 mo of starting ADT	77% (57), **consensus**
	2. Defer RT up to 6 mo after the start of ADT	18% (13)
	3. Defer RT up to 12 mo after the start of ADT	5% (4)
	4. Defer RT up to 24 mo after the start of ADT	0
For patients with advanced prostate cancer on AR pathway inhibitors (Abi/Apa/Daro/Enza), do you recommend telemedicine (assuming that blood tests are done by the general practitioner) to monitor the treatment during the active phase of the COVID-19 pandemic in unvaccinated patients?	1. Yes, telemedicine alone is enough unless there is a clinical reason to review in person	47% (35)
	2. Yes, but the patient should still have regularly scheduled in-person clinic reviews from time to time	52% (38)
Answer options 1 and 2 combined: 99%		
	3. No	1% (1)
For patients with advanced prostate cancer on AR pathway inhibitors (Abi/Apa/Daro/Enza), do you recommend telemedicine (assuming that blood tests are done by the general practitioner) to monitor the treatment during the active phase of the COVID-19 pandemic if the patient is fully vaccinated?	1. Yes, telemedicine alone is enough unless there is a clinical reason to review in person	30% (22)
	2. Yes, but the patient should still have regularly scheduled in-person clinic reviews from time to time	64% (47)
Answer options 1 and 2 combined: 94%		
	3. No	6% (4)
	4. Abstain	1
For patients with advanced prostate cancer on AR pathway inhibitors (Abi/Apa/Daro/Enza), do you recommend telemedicine (assuming that blood tests are done by the general practitioner) to monitor the treatment outside of an active COVID-19 pandemic?	1. Yes, telemedicine alone is enough unless there is a clinical reason to review in person	18% (13)
	2. Yes, but the patient should still have regularly scheduled in-person clinic reviews from time to time	68% (50)
Answer options 1 and 2 combined: 86%		
	3. No	14% (10)
	4. Abstain	1
In patients with advanced prostate cancer on systemic therapy who are fully vaccinated against COVID-19, do you recommend a COVID-19 vaccine boost injection?	1. Yes, in the majority of patients	84% (60), **consensus**
	2. Yes, but only in patients on steroid containing treatment regimens (abiraterone, docetaxel, cabazitaxel)	6% (4)
	3. No	10% (7)
	4. Abstain	3

Abi = abiraterone; ADT = androgen-deprivation therapy; Apa = apalutamide; APCCC = Advanced Prostate Cancer Consensus Conference; AR = androgen receptor; COVID-19 = coronavirus disease 2019; CT = computed tomography; Daro = darolutamide; Enza = enzalutamide; mCRPC = metastatic castration-resistant prostate cancer; mHSPC = metastatic hormone-sensitive prostate cancer; PET = positron emission tomography; PSMA = prostate-specific membrane antigen; RT = radiotherapy.

The question regarding the recommendation of the COVID-19 vaccine in patients with APC reached a strong consensus, with 97% of panellists voting in favour of vaccination. It has been shown that cancer patients can mount a protective immune response to the COVID-19 vaccine without experiencing more side effects than the general population [6], and therefore vaccination against COVID-19 is deemed safe for cancer patients. Panellists also reached a consensus for COVID-19 vaccine boost injection in APC patients (84%). A vaccination boost in the population over 60 reduces the incidence of COVID-19 and severe illness [7], but more evidence is needed to better understand the optimal timing of such a boost (Supplementary material).

The COVID-19 pandemic changed the management of APC patients for 70% of panellists in the time before the vaccinations became available. Once the vaccines became available, only 25% of the panellists would still change management for fully vaccinated patients. The panel did not consider the effects of COVID-19 variants where the available vaccines may be less effective.

There was a consensus in the panel (77%) not to change the therapeutic choice during the active phase of COVID-19 for fully vaccinated patients with high-risk localised or locally advanced prostate cancer, for whom definitive radiation therapy in combination with long-term ADT is planned. In addition, for chemotherapy-fit patients with

metastatic castration-resistant prostate cancer (mCRPC) who had received at least one line of androgen receptor pathway inhibitors (ARPIs) and one line of taxane-based chemotherapy, there was a consensus (79%) not to change the treatment decision in fully vaccinated patients. Consensus was not reached regarding changes in therapeutic choices for unvaccinated patients in the same settings.

Several life-prolonging therapies are now available for patients with metastatic hormone-sensitive prostate cancer (mHSPC), including docetaxel, abiraterone, enzalutamide, and apalutamide [8]. No formal consensus was reached on which systemic treatment would be preferred during an active phase of the COVID-19 pandemic, but 69% of the panellists would not change their usual treatment for fully vaccinated patients with mHSPC. In contrast, 71% of panellists were less likely to offer docetaxel, abiraterone/prednisone, or both, for unvaccinated patients.

The vaccination status of a patient with mCRPC had less effect on treatment decisions. For example, 58% of the panellists would use cabazitaxel less frequently in unvaccinated mCRPC patients who were suitable for chemotherapy and who had received at least one ARPI and one taxane-based chemotherapy; only 20% would use cabazitaxel less frequently in this setting for fully vaccinated patients.

These differences could be because chemotherapy in general has been reported to have a negative impact on the outcome of COVID-19 infections, and usually concomitant and premedication steroids are used. Therefore, some COVID-19–specific guidelines recommend avoiding taxane treatment during a peak of the COVID-19 pandemic in mHSPC and mCRPC patients if a similarly effective alternative therapy is available, in order to reduce the risk of neutropenia and number of hospital visits during the pandemic [9]. It is important to note that most of these guidelines were established when no vaccines were available.

Telemedicine in general has been shown to reduce health care costs and in-person patient visits without worsening the quality of communication between physician and patient. Telemedicine may also help reduce the transmission of COVID-19 in health care settings [10]. No formal consensus was reached regarding the use of telemedicine in patients on an ARPI, but 94% of panellists recommend it during an active phase of the pandemic. Interestingly, 86% of the experts would recommend its use in some form also outside of an active phase of the pandemic.

In summary, there was a consensus among the APCCC 2021 panellists to encourage "full vaccination" in all APC patients as well as for the booster injection. Management recommendations were influenced by patient vaccination status across different APC settings. Many panellists voted in favour of reducing the use of certain treatments due to a perceived increased risk of serious complications of COVID-19.

The APCCC 2021 meeting has cast light on different recommendations and perceptions of risks of various treatments for APC in the setting of the COVID-19 pandemic. These findings will remain relevant in the event of a resurgence of vaccine-resistant variants or indeed future pandemics of novel pathogens. Simple approaches to minimise the risk of transmission or death are needed and supported. Effective anticancer therapies still need to be provided. A discussion with each patient is warranted to ensure that consideration of their personal risks of COVID-19 is taken into account as they make decisions about their treatments. Finally, there was a consensus among the experts to use telemedicine in place of some in-person visits for patients treated with ARPIs. In addition, it is interesting to see how fast the meaning of "fully vaccinated" has changed in times of this pandemic, and the fast development of vaccines and growing knowledge about the duration of response to them.

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Study concept and design: Turco, Gillessen, Omlin.
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Analysis and interpretation of data: All authors.
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