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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

Fabio Turco^{a,b,*}, Andrew Armstrong^c, Gerhardt Attard^d, Tomasz M. Beer^e, Himisha Beltran^f, Anders Bjartell^g, Alberto Bossi^h, Alberto Brigantiⁱ, Rob G. Bristow^{j,k}, Muhammad Bulbul^l, Orazio Caffo^m, Kim N. Chiⁿ, Caroline Clarke^o, Noel Clarke^p, Ian D. Davis^q, Johann de Bono^r, Ignacio Duran^s, Ros Eeles^t, Eleni Efstathiou^u, Jason Efstathiou^v, Christopher P. Evans^w, Stefano Fanti^x, Felix Y. Feng^y, Karim Fizazi^z, Mark Frydenberg^{aa,ab}, Dan George^{ac}, Martin Gleave^{ad}, Susan Halabi^{ae}, Daniel Heinrich^{ag}, Celestia Higano^{ah}, Michael S. Hofman^{ai}, Maha Hussain^{aj}, Nicholas James^{ak}, Rob Jones^{al}, Ravindran Kanesvaran^{am}, Raja B. Kauli^{an}, Laurence Klotz^{ao}, Raya Leibowitz^{ap,aq}, Christopher Logothetis^{ar,as,at}, Fernando Maluf^{au,av}, Robin Millman^{aw}, Alicia K. Morgans^f, Michael J. Morris^{ax}, Nicolas Mottet^{ay}, Hind Mrabti^{az}, Declan G. Murphy^{ba,bb}, Vedang Murthy^{bc}, William K. Oh^{bd}, Ngozi Ekeke Onyeonunam^{be}, Piet Ost^{bf,bg}, Joe M. O'Sullivan^{bh,bi}, Anwar R. Padhani^{bj}, Christopher Parker^{bk}, Darren M.C. Poon^{bl}, Colin C. Pritchard^{bm}, Danny M. Rabah^{bn}, Dana Rathkopf^{bo}, Robert E. Reiter^{bp}, Mark Rubin^{bq,br}, Charles J. Ryan^{bs}, Fred Saad^{bt}, Juan Pablo Sade^{bu}, Oliver Sartor^{bv}, Howard I. Scher^{bo,bw}, Neal Shore^{bx}, Iwona Skoneczna^{by,bz}, Eric Small^{ca}, Matthew Smith^{cb}, Howard Soule^{cc}, Daniel Spratt^{cd}, Cora N. Sternberg^{ce,cf}, Hiroyoshi Suzuki^{cg}, Christopher Sweeney^{ch}, Matthew Sydes^{ci}, Mary-Ellen Taplin^{ch}, Derya Tilki^{cj,ck,cl}, Bertrand Tombal^{cm}, Levent Türkeri^{cn}, Hiroji Uemura^{co}, Hirotugu Uemura^{cp}, Inge van Oort^{cq}, Kosj Yamoah^{cr}, Dingwei Ye^{cs,ct}, Almudena Zapatero^{cu}, Silke Gillessen^{cv,cw,cx,cy,cz,1}, Aurelius Omlin^{cy,da,1}

^a Oncology Institute of Southern Switzerland, EOC, Bellinzona, Switzerland; ^b Division of Medical Oncology, Department of Oncology, San Luigi Gonzaga Hospital, University of Turin, Orbassano, Turin, Italy; ^c Duke Cancer Institute Center for Prostate and Urologic Cancers, Durham, NC, USA; ^d University College London Cancer Institute, London, UK; ^e Knight Cancer Institute, Oregon Health & Science University, Portland, OR, USA; ^f Dana-Farber Cancer Institute and Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; ^g Department of Urology, Skåne University Hospital, Malmö, Sweden; ^h Genito Urinary Oncology, Prostate Brachytherapy Unit, Goussave Roussy, Paris, France; ⁱ Unit of Urology/Division of Oncology, URI, IRCCS Ospedale San Raffaele, Vita-Salute San Raffaele University, Milan, Italy; ^j Division of Cancer Sciences, Faculty of Biology, Medicine and Health, University of Manchester, Manchester, UK; ^k Christie NHS Trust and CRUK Manchester Institute and Cancer Centre, Manchester, UK; ^l Division of Urology, Department of Surgery, American University of Beirut Medical Center, Beirut, Lebanon; ^m Department of Medical Oncology, Santa Chiara Hospital, Trento, Italy; ⁿ BC Cancer, Vancouver Prostate Centre, University of British Columbia, Vancouver, British Columbia, Canada; ^o Research Department of Primary Care & Population Health, Royal Free Campus, University College London, Rowland Hill St, London, UK; ^p The Christie and Salford Royal Hospitals, Manchester, UK; ^q Monash University and Eastern Health, Victoria, Australia; ^r The Institute of Cancer Research/Royal Marsden NHS Foundation Trust, Surrey, UK; ^s Department of Medical Oncology, Hospital Universitario Marques de Valdecilla, IDIVAL, Santander, Cantabria, Spain; ^t The Institute of Cancer Research and Royal Marsden NHS Foundation Trust, London,

¹ These authors contributed equally.

* Corresponding author. Oncology Institute of Southern Switzerland, EOC, Bellinzona, Switzerland. Tel. +393927704290.

E-mail address: turcofabio9@gmail.com (F. Turco).



UK; ^u Houston Methodist Cancer Center, Houston, TX, USA; ^v Department of Radiation Oncology, Massachusetts General Hospital, Boston, MA, USA; ^w University of California Davis School of Medicine, Sacramento, CA, USA; ^x Policlinico S. Orsola, Università di Bologna, Bologna, Italy; ^y University of California, San Francisco, San Francisco, CA, USA; ^z Institut Gustave Roussy, University of Paris Saclay, Villejuif, France; ^{aa} Department of Surgery, Monash University, Melbourne, Australia; ^{ab} Prostate Cancer Research Program, Department of Anatomy & Developmental Biology, Faculty of Nursing, Medicine & Health Sciences, Monash University, Melbourne, Australia; ^{ac} Departments of Medicine and Surgery, Duke Cancer Institute, Duke University, Durham, NC, USA; ^{ad} Urological Sciences, Vancouver Prostate Centre, University of British Columbia, Vancouver, Canada; ^{ae} Department of Biostatistics and Bioinformatics, Duke University, Durham, NC, USA; ^{af} Department of Oncology and Radiotherapy, Innlandet Hospital Trust, Gjøvik, Norway; ^{ah} University of British Columbia, Vancouver, British Columbia, Canada; ^{ai} Peter MacCallum Cancer Centre and Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia; ^{aj} Robert H. Lurie Comprehensive Cancer Center, Northwestern University, Chicago, IL, USA; ^{ak} The Institute of Cancer Research, London, UK; ^{al} Institute of Cancer Sciences, University of Glasgow, Glasgow, UK; ^{am} Division of Medical Oncology, National Cancer Centre, Singapore; ^{an} Department of Urology and the Naef K. Basile Cancer Institute (NKBCI), American University of Beirut Medical Center, Beirut, Lebanon; ^{ao} Division of Urology, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, ON, Canada; ^{ap} Oncology institute, Shamir Medical Center, Zerifin, Israel; ^{aq} Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel; ^{at} Department of Genitourinary Medical Oncology, MD Anderson Cancer Centre, Houston, TX, USA; ^{as} Department of Clinical Therapeutics, Alexandra Hospital, University of Athens, Athens, Greece; ^{at} David H. Koch Centre, Department of Genitourinary Medical Oncology, The University of Texas M. D. Anderson Cancer Centre, Houston, TX, USA; ^{au} Beneficência Portuguesa de São Paulo, São Paulo, SP, Brazil; ^{av} Departamento de Oncologia, Hospital Israelita Albert Einstein, São Paulo, SP, Brazil; ^{aw} Patient Advocate, UK; ^{ax} Memorial Sloan Kettering Cancer Center, New York, NY, USA; ^{ay} University Hospital Nord St Etienne, St Etienne, France; ^{az} National Institute of Oncology, University hospital, Rabat, Morocco; ^{ba} Division of Cancer Surgery, Peter MacCallum Cancer Centre, Melbourne, Australia; ^{bb} Sir Peter MacCallum Department of Oncology, University of Melbourne, Parkville, Australia; ^{bc} Tata Memorial Centre, Mumbai, India; ^{bd} Division of Hematology and Medical Oncology, Icahn School of Medicine at Mount Sinai, The Tisch Cancer Institute, New York, NY, USA; ^{be} Department of Surgery, University of Port Harcourt Teaching Hospital, Alakahia, Port Harcourt, Nigeria; ^{bf} Department of Radiation Oncology, Iridium Network, Wilrijk (Antwerp), Belgium; ^{bg} Department of Human Structure and Repair, Ghent University, Ghent, Belgium; ^{bh} Patrick G. Johnston Centre for Cancer Research, Queen's University Belfast, Belfast, Northern Ireland; ^{bi} Northern Ireland Cancer Centre, Belfast City Hospital, Belfast, Northern Ireland; ^{bj} Mount Vernon Cancer Centre and Institute of Cancer Research, London, UK; ^{bk} Royal Marsden Hospital and Institute of Cancer Research, Sutton, UK; ^{bl} Comprehensive Oncology Centre, Hong Kong Sanatorium & Hospital, The Chinese University of Hong Kong, Hong Kong; ^{bmm} Department of Laboratory Medicine and Pathology, University of Washington, Seattle, WA, USA; ^{bnn} The Cancer Research Chair, College of Medicine, King Saud University, Riyadh, Saudi Arabia; ^{bo} Genitourinary Oncology Service, Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY, USA; ^{bp} University of California Los Angeles, Los Angeles, CA, USA; ^{bq} Bern Center for Precision Medicine, Bern, Switzerland; ^{br} Department for Biomedical Research, University of Bern, Bern, Switzerland; ^{bs} Masonic Cancer Center, University of Minnesota, Minneapolis, MN, USA; ^{bt} Centre Hospitalier de Université de Montréal, Montreal, Canada; ^{bu} Instituto Alexander Fleming, Buenos Aires, Argentina; ^{bv} Tulane Cancer Center, New Orleans, LA, USA; ^{bw} Department of Medicine, Weill Cornell Medical College, New York, NY, USA; ^{bx} Carolina Urologic Research Center, Myrtle Beach, SC, USA; ^{by} Rafal Masztak Grochowski Hospital in Warsaw, Warsaw, Poland; ^{bz} Maria Skłodowska Curie National Research Institute of Oncology, Warsaw, Poland; ^{ca} UCSF Helen Diller Family Comprehensive Cancer Center, University of California San Francisco, San Francisco, CA, USA; ^{cb} Massachusetts General Hospital Cancer Center, Boston, MA, USA; ^{cc} Prostate Cancer Foundation, Santa Monica, CA, USA; ^{cd} University Hospitals Seidman Cancer Center, Cleveland, OH, USA; ^{ce} Englander Institute for Precision Medicine, Weill Cornell Medicine, New York, NY, USA; ^{cf} Division of Hematology and Oncology, Meyer Cancer Center, New York Presbyterian Hospital, New York, NY, USA; ^{cg} Toho University Sakura Medical Center, Chiba, Japan; ^{ch} Department of Medical Oncology, Dana-Farber Cancer Institute and Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; ^{ci} MRC Clinical Trials Unit at UCL, Institute of Clinical Trials and Methodology, University College London, London, UK; ^{cj} Martini-Klinik Prostate Cancer Center, University Hospital Hamburg-Eppendorf, Hamburg, Germany; ^{ck} Department of Urology, University Hospital Hamburg-Eppendorf, Hamburg, Germany; ^{cl} Department of Urology, Koc University Hospital, Istanbul, Turkey; ^{cm} Cliniques Universitaires Saint Luc, Brussels, Belgium; ^{cn} Department of Urology, M.A. Aydınlar Acibadem University, Altunizade Hospital, Istanbul, Turkey; ^{co} Yokohama City University Medical Center, Yokohama, Japan; ^{cp} Department of Urology, Kindai University Faculty of Medicine, Osaka, Japan; ^{cq} Radboud University Medical Center, Nijmegen, The Netherlands; ^{cr} Department of Radiation Oncology & Cancer Epidemiology, H. Lee Moffitt Cancer Center & Research Institute, University of South Florida, Tampa, FL, USA; ^{cs} Department of Urology, Fudan University Shanghai Cancer Center, Shanghai, China; ^{ct} Department of Oncology, Shanghai Medical College, Fudan University, Shanghai, China; ^{cu} Department of Radiation Oncology, Hospital Universitario de La Princesa, Health Research Institute, Madrid, Spain; ^{cv} Oncology Institute of Southern Switzerland, Bellinzona, Switzerland; ^{cw} Università della Svizzera Italiana, Lugano, Switzerland; ^{cx} Cantonal Hospital, St. Gallen, Switzerland; ^{cj} University of Bern, Bern, Switzerland; ^{cz} Division of Cancer Science, University of Manchester, Manchester, UK; ^{da} Department of Medical Oncology and Haematology, Cantonal Hospital, St. Gallen, Switzerland

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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 $\geq 75\%$ 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.

Acquisition of data: All authors.

Analysis and interpretation of data: All authors.

Drafting of the manuscript: Turco, Gillessen, Omlin.

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Supplementary data

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