

'Toxicities can occur at any timepoint': Doing
checkpoint inhibitor toxicity management.

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Project Summary

Experiences of cancer immunotherapy with immune checkpoint inhibitors (ICI's).

- Three workstreams
 - WP1: Systematic qualitative evidence synthesis.
 - WP2: Interview study (Patients' and families' experiences of immunotherapy with ICI's).
 - WP3: Interview study (Oncology health professionals' experiences of cancer immunotherapy with ICI's).

Background

- Greater access to some immune checkpoint inhibitors is transforming outcomes for more people with some cancers.
- Immune checkpoint inhibitors can be associated with diverse, novel, unpredictable immune-related toxicities.
- Oncology health professionals are critical to safe, effective person-centred care, yet little is known of their experiences of supporting patients receiving immune checkpoint inhibitors.
- This knowledge is important to improve understanding, identify knowledge gaps, inform patient and health professionals' immunotherapy education and optimise patients' health outcomes.

AIM

To better understand oncology health professionals' support for people treated with immune checkpoint inhibitors for cancer.


A stylized graphic of a pen nib writing on a colorful, abstract background. The pen nib is dark and pointed, with a small drop of ink. The background is a vibrant, multi-colored pattern of horizontal bands in shades of red, blue, yellow, and purple, resembling a DNA microarray or a colorful data visualization. The overall effect is artistic and modern.

Methods

- Qualitative.
- Purposive sample.
- In-depth interview.
- Reflexive thematic analysis (Braun & Clarke)

Findings

- Thirty six participants:
 - 12 Oncology RN's
 - 3 Oncologists
 - 3 Oncology pharmacists
 - 16 patients (12 Men, 4 women)
 - 2 family caregivers (2 women)
- *'We're in new territory'*: Balancing certainty with uncertainty.
- ***'Toxicities can occur at any timepoint': Doing checkpoint inhibitor toxicity management.***
- *'It's a newness thing'*: Prioritising immunotherapy education enhancement.

A hand holding a compass in a desert landscape. The hand is wearing a green long-sleeved shirt. The compass is a standard analog compass with a white face and black markings. The background shows a paved road winding through a desert with rolling hills under a clear blue sky.

“Toxicities can occur at any time point”:
Doing checkpoint inhibitor toxicity management

We'll have **some patients that fly through it.** It has almost virtually no side effects. You de-stable the disease for two years. **We never have any, never hear a peep from them.** No problem at all. And then you get the **others then that, almost lose a kidney or else end up on dialysis,** etcetera. So, it, some are very complex, some are very easy. (Ceri, Pharmacist).

*What you see in practice, obviously the GI, the lung, the skin, that sort of stuff. [...] And the thyroid, obviously. But **a bit of everything** really. (Ceri, Pharmacist)*

*We know with immunotherapy, unlike chemo, that the **side effects** tend to come on a little **bit later**. They **don't tend to be quite such an acute onset as chemotherapy**, but the **side effects** can **go on for much longer**. (Jules, Immunotherapy CNS)*

*They could have **delayed toxicities up to 18 months** because that's a worry. That's something we need to think about. (Sam, SS CNS)*

*'I had a **chest infection**, but then it turned out then afterwards, then, that **chest infection cleared**, and I had **pneumonitis** then, which was fetched on by the immunotherapies. So they **stopped the immunotherapy and started me on steroids.**' (Dewi)*

*'After I'd finished the four doses, [I] got quite bad, but a different sort of **rash** (...). So, **I went on steroids** to try and control that, to help my body fight the rash. Cut a long story short, **the steroid made me sick** (....), I missed a treatment.'* (Catrin)

*The telephone call from... even before COVID this was, before, from the oncologist or from the team just to say, “**Yeah, your bloods are fine. Have you got any symptoms? Do you feel okay?**” (Catrin)*

*When [names CNS] calls, it’s very, “**How are you feeling?**” “Yes, I’m fine.” “**Are you ready for your next treatment?**” We’ll discuss my bloods. I go for my bloods two days prior to her call. She’ll discuss that and she will say, “**Yeah, I’m happy for your treatment to go ahead.**” (Ruth)*

*They ask all sorts of things, how you’re feeling, etc. They go through any results which is shown up on the blood test. One time the pharmacist rung me instead of one of the doctors and went through in more detail, I felt, about the drugs and what I was on, and all that sort of thing. (...). The pharmacist introduced his self on the phone and said, “**I work with [names doctor] team**”, he said, so “**I’d like to go through, if you... if it’s okay with you, on how you’re feeling and... and the treatment and what drug you’re on**”. I felt he was in more detail than what the cons, discussion would have been with the consultant or one of the doctors. (Gryff)*

*Our **patients are given a separate immunotherapy or checkpoint inhibitor treatment diary, [...]. That will include the triage tool, so that they can rate for themselves their symptoms and to identify obviously green, amber or red. And, at what point they should access help and advice, but normally what we say to them is, 'anything that's different from normal, just pick up the phone.'** It's much better that we know about it sooner, because hopefully we can deal with it better and avoid a major complication. (Frankie, AO, CNS)*

***Emphasise to patients** if they are getting any symptoms, that **they let us know** so that **we can try and manage any adverse effects at an early stage.** (Morgan, Pharmacist)*

In essence, what she [CNS] has said is, if I get any symptoms at all, to contact them and tell them what it is. In other words, don't just sit back and assume you know what it is, get in touch, tell them. And I understand that in part that is because they're still a bit building their database on these issues. So... They want to know. (David)

[If] 'anything happens regarding the treatment or while you're having the treatments, don't hesitate to shout out and let us know straight, asap, and what you feel and what have you.' So, yeah that was absolutely... it was explained to me. (Harri)

Ultimately there's always a few that will think 'oh, I can... ***I can self-medicate. I can sort it out myself***'. (Ceri, Pharmacist)



They'd been to the **opticians** off of their own bat because their **vision had become more blurry**, and the **optician** hadn't necessarily... you know, just given them a **prescription for some new glasses**, hadn't really gone into any more depth, but I don't really know how much more an optician would, to be honest anyway. But when he was triaged on the **helpline** [...] he reported that he had an **increase in thirst**, an **increased urine output**, especially **overnight** and with the **blurred vision**. And then my colleague got him **admitted** for a review and his **blood sugars were above 40** when he came in, and he was nearly in a **diabetic ketoacidosis** [...] And he was then diagnosed with a type 1 diabetes, so he then **completed his treatment**, his disease is in response [sic]. So he is no longer needing treatment, but **he now had a type 1 diabetes**. (Alex, CNS)

*It's like my eyes, I said to you about my eyes, have gone a bit blurry. **But is that just me or is it the drug? I don't know . I don't know.***

*I: So, you went online. **What sort of information did you find online?***

*Mari: Quite a bit really. It wasn't, I mean, actually, I got more information off the leaflets they give me, to be quite frank . (...) And **because I've been feeling not 100%, I started taking some multivitamins, and I don't know really know whether I'm meant to do that on this drug, whether or not it's going to interfere with it. So, I went online to see whether or not, and it didn't... didn't actually recommend it, but I have been taking them'.***

*Everybody in my situation is the same, and I've spoken to patients when I've been for treatments. I think you don't want to bother them [staff], and I know I think I didn't, and I think I knew it was quite a bad rash, but I said, "**Well, I'll be down there in another couple of weeks or days now between going for bloods and going for treatment. It's fine; it'll be okay**".* (Catrin)

*I think I'm being a bit of bother to them. Because I think it's only a minor thing, and I think, '**Oh, I'll just be a bother to them. They don't want, they don't need to hear about this**'.* (Dewi)

*I don't really like to call it [helpline], because **generally I'm fit and well**. I see other people when I'm having my treatment in the chairs who are significantly more unwell than I am.* (Ruth)

*'**I'm 70 odd**, so I'm not exactly running around like a two-year old. Sometimes, maybe the... **what I'm getting is because of my age** and not... nothing to do with the... the therapy stuff. So, it's sometimes I have to think, well, '**maybe this is this**', and '**maybe it's not**'.* (Mari)

The problem with the rash on my wrist is, I don't really want to have to stop the immunotherapy because obviously...It's working ...So this is a bit of a catch-22 with my... The rash at the moment, but I don't really... I know there's some... I know it can cause heart disease and a few other sort of bits and bobs, as well as the side effects of the immunotherapy, but I don't really want to stop it. (Rhys)

It's one of these things, you think, well, if you stop treatment, it's [cancer] going to spread all over the body quite quickly. (Evan)

*If I mention something he (CNS) investigates it straightaway. One of the things I did have early on in the treatment was **bowel**... you know I just couldn't go to the toilet for about **nine days** and they sorted that out. (Ralph)*

*I had a really **dry mouth** all of the time. So, I called that through, and then the second time was not so long ago, probably about 12 weeks ago I was getting **heart palpitations**. But I went to the assessment day unit at [names place] and everything was fine. (Ruth)*

*I could **hardly eat and drink**. I just didn't want it. **I couldn't keep it down**. I would bring it back up if I ate something. That went on for a couple of weeks. We went to see our local doctor and they give me all sorts of stuff to try including a food type drink to have. But still **my appetite was totally gone**. And in the end, we phoned the consultant's people at the hospital and they said, "**you got to go to A&E this afternoon, you got to be taken in hospital**". (Gryff)*

*A lot of our patients, their first language is not English. So sometimes you're having to do a toxicity assessment on a patient on immunotherapy, over the telephone with a relative, and **it really is quite challenging**. [...]. But you can kind of hear it sometimes in someone's voice, maybe, like, you know, "Oh, something doesn't sound right there." (Sean, AO, ANP)*

*Some of the presentations of symptoms can be very, very vague. So the staff did and still do struggle very much with trying to assess people's toxicities when... immunotherapy over the phone, **and it's very complex and it's very easy to miss certain things when they do phone up**. (Billie, AO, CNS)*

*We went and sat 14 hours in the A&E department, which was wonderful. At 2 o'clock in the morning I was taken into the A&E department and put on a drip. And they found that I was completely dehydrated and needed to stay on this drip for a time. So we've... we had that. I was in the A&E department for a day, then I was moved onto a ward and was continually fed these drips. Lot of doctors were coming in looking at me and talking and asking what... what was going on, how I felt, and trying to find the cause of it. **It seems as though they didn't understand the immune therapy was on. (...)** I was on this trolley in A&E, amongst a lot of other people, and this specialist nurse come in and was reading through my notes, come over to speak to me and explained that they were from the [names] nurses who are in the hospital. (...), and asked me how I was, what were the effects were. And said, 'well, I'll go and have a chat with the doctors and come... we'll come back to you'. Within a couple of hours, a doctor had come down into the A&E department and wrote the prescription out for some... some drugs to give me . Then this specialist nurse come back and explained that there was a problem with my thyroid gland, that the treatment had knocked the thyroid gland out, I believe, and it was no longer functioning properly. (Gryff)*

These **patients will present to other hospitals**, and actually whilst most oncologists can manage toxicities, you know, it's the treating teams on the ground that need to be able to provide that holistic care. (Kim, oncologist)

Things like pneumonitis, you need a lung specialist and **they're all in other hospitals**. Gastro especially, diarrhoea, we need gastroenterologists and some patients need surgery, they lose their bowel. They become really unwell and they could die from these side-effects if they're not managed appropriately. (Sam, SS CNS)

We've got the immunotherapy specialist nurses, and they've done a lot of work with, contacting the other specialities to create links and get a greater understanding of how the immunotherapy can have adverse effects on a different body of systems and what help we need from them. And it's been a very much of, **"We need your help. Can you help us?"** and they've been more than willing to offer their expertise. (Alex, AO, CNS)

The barriers I've experienced is that **if a patient develops a toxicity, is getting access to the specialist to manage that.** So, if it's a thyroid or hormone problem, is getting access to an endocrinologist that has an interest in the management of immuno related toxicity. The same for gastro, if they get colitis, it's about accessing colonoscopy in a timely manner; gastro expertise in terms of giving [inaudible] and how to manage that. It's the dermatology for the skin rash, rheumatology... because the side effects are so varied and quite complex. (...). **It does involve a lot of other medical disciplines and I think that's probably a barrier.** But they're also busy with their general medical work, to then take on a specialist interest in oncology related toxicities, it's quite challenging for them (Pat, Oncologist)

Key messages

- Checkpoint inhibitors offer genuine possibility of improved disease and survivorship outcomes engendering hope and optimism. This is balanced against profound uncertainties regarding disease response, complex toxicities and their management.
- Optimal toxicity management and patient safety is contingent on nurses' expert knowledge, care coordination and organisation of cross-boundary multi-professional care. However, privileging toxicity management runs the risk of downplaying holistic care and psychological support.
- The complexity of supporting people receiving cancer immunotherapy is set against a background of suboptimal immunotherapy knowledge. Educational preparation and support for patients, the public and health professionals in primary and secondary care must be prioritised and appropriate, accessible educational interventions and implementation strategies co-developed.

Thank you for listening

Does anybody have any questions?