

# ADOPTING AN INTEGRATED APPROACH TO SUPPORTIVE CARE IMPROVES END OF LIFE CARE FOR PATIENTS WITH SEVERE IMMUNOTHERAPY TOXICITY

D Monnery, A Robinson, N Garbutt, A Law & A Olsson Brown. The Clatterbridge Cancer Centre NHS Foundation Trust, Liverpool, United Kingdom

## Introduction

Immunotherapy has revolutionised cancer care by providing a treatment option for cancers with historically poor prognoses, providing a realistic option for prolonging survival<sup>1</sup>. However, alongside widespread role out of this therapy has come an increased appreciation of immunotherapy toxicities<sup>1</sup>. According to Cancer Research UK, up to 27% of patients receiving an Immune Checkpoint Inhibitor (ICI) will develop severe or life threatening toxicity<sup>2</sup> and one study has reported the mortality rate from immune-related toxicity as 4%<sup>3</sup>. It has been our observation at our centre that patients dying from immunotherapy toxicity die quickly, with poorer symptom control and less opportunity to engage with advance care planning. However there is little knowledge to enable us to predict which patients will die of their toxicities. One approach at our centre has been to integrate our supportive care service with immunotherapy toxicity services to try to enable smoother end of life care for patients if they are admitted with immunotherapy toxicity and then die from it.

**Aim: To investigate the impact of creating an integrated supportive care service, including palliative care and immunotherapy toxicity services, on the end of life outcomes for those who die of immunotherapy toxicity**

## Method

In September 2021 we integrated palliative care and immunotherapy toxicity services. This was characterised by establishing: a shared governance structure for supportive care, co-led by a palliative care consultant and medical oncologist; a shared education program; shared clinical pathways to enable holistic care regardless of practitioner; and an integrated research agenda across teams. It became accepted practice for palliative care to see patients receiving inpatient care for immunotherapy toxicities to engage in advance care planning and address symptoms alongside the management of those toxicities, even in patients who had been cured by their immunotherapy. It also became standard practice for palliative care services to be involved in the supportive care of patients receiving immunotherapy from an earlier point in an admission, even if they did not have immunotherapy toxicity diagnosed. For patients who then deteriorated, the palliative care team were already engaged. In May 2023, a retrospective case note review was undertaken comparing end of life care metrics for patients dying before and after September 2021. This included patients dying of immunotherapy toxicity.

## Results

Before (August 18- September 21)

After (September 21- May 23)

1440 patients given immunotherapy (Based on 691 patients per year average over 25 months)

1743 patients given immunotherapy (Based on 1046 patients per year average over 20 months)

646 Admitted to hospital during immunotherapy

514 Admitted to hospital during immunotherapy

250 confirmed immunotherapy toxicity cases

184 confirmed immunotherapy toxicity cases

29 died

45 died

4 had immunotherapy toxicity as cause of death

13 had immunotherapy toxicity as cause of death

End of life care metrics extracted for these tiers

In both groups, median time from recognising dying to death was **2 days**

Advance care plan complete  
19 (65.5%)

Immunosuppressants weaned  
8 (27.6%)

Preferred place of death achieved  
9 (31%)

Uncontrolled agitation at end of life  
17 (58.6%)

Advance care plan complete  
38 (84.4%)

Immunosuppressants weaned  
31 (68.9%)\*

Preferred place of death achieved  
20 (44.4%)

Uncontrolled agitation at end of life  
15 (33.3%)\*\*

\*p <0.01

\*\*p <0.05

## Discussion

- Between our groups, the mortality rate from immunotherapy toxicity as a proportion of all patients given immunotherapy remained low at 0.27% and 0.75% respectively. There was a notable increase in the use of immunotherapy within the study period due to new drug regimes receiving NICE approval for use in more malignancies.
- Despite increased use of immunotherapy, admissions in patients receiving immunotherapy including those related to toxicity **decreased** over the study period- this may reflect greater ambulatory management of immunotherapy toxicity as professional practice, guidance and confidence develops.
- Patients had better end of life outcomes after the integration of palliative care and immunotherapy toxicity teams, even though recognition of dying did not occur any earlier. This likely reflects the fact that dying with immunotherapy toxicity occurs rapidly and the change in clinical care that affected change was that care which coincided with the active treatment of the toxicity, not the end of life care itself. Furthermore as many cases of patients who died were those dying whilst receiving immunotherapy rather than of immunotherapy toxicity itself, these patients may always have been a cohort which received palliative care but the change in care triggered by this initiative is the weaning of immunosuppressants by the toxicity team when dying is recognised- it is possible that weaning steroids before the end of life was a factor in the lower rates of terminal agitation noted after the integration.
- Whilst the proportion of patients seeing palliative care increased from 25.7% to 37.6% and this was statistically significant, the improvements in patient care more likely reflect the impact the integration had on the other members of the team.
- As well as advance care plans occurring to a greater extent post-integration, they also occurred earlier, indicating that this is an example of an element of care delivered earlier by the integrated team alongside active toxicity management.

## Conclusion

Whilst recognising dying occurs late in this group of patients, and this was not altered by this intervention the shared education and governance of both teams appears to have altered practice from an earlier point in the patient admission and this change is not restricted to those dying of their immunotherapy toxicity. This improvement has enabled easier access to palliative care but has also changed prescribing practice and communication among other team members which is likely to have been predominantly responsible for the changes seen.

## Next Steps

This study is valuable for its observation of trends and difficulties in recognising and responding to dying in patients with immunotherapy even though there is insufficient data here to recommend interventions which specifically will cater for this group. Further prospective work to examine the role supportive care services in supporting people receiving immunotherapy including palliative care would help to define how these services integrate best and at which points in the patient's treatment to yield optimal outcomes for patients regardless of prognosis.

## References

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