A Review of Evidence Supporting NCCN Category 2B Off-Label **Recommendations for Determination of Medicare Reimbursement Eligibility**

Molly DiScala MS¹, Brett Mahon MD¹, Gary Grad MD¹, Kenneth R. Carson MD, PhD^{1,2} ¹Tempus Labs, Inc., Chicago, IL, USA, ²Rush University Medical Center, Chicago, IL, USA

INTRODUCTION

Antineoplastic indications that are "off-label" but supported by a category 1 or 2A NCCN guideline recommendation are generally reimbursed by private insurance and Medicare. While initial coverage requests for off-label NCCN category 2B indications may be denied, Medicare will consider reimbursement for 2B indications supported by clinical trial evidence published in one of 26 peerreviewed journals.

Herein, we evaluated the published clinical evidence supporting off-label drug indications in 10 common solid tumor types that are supported only by NCCN category 2B evidence.

METHODS

Category 2B drug indications for the 10 most common solid tumors were identified in the NCCN compendium (n=104).

These were then filtered to remove the 2B indications associated with concurrent category 1 or 2A indication(s) in the same tumor type (n=90), as the higher category indications could offer an alternate pathway to reimbursement and/or lower payer scrutiny.

Next, drugs with an FDA approval in the tumor of interest, but supported by only category 2B evidence at NCCN, were excluded from the study (n=6). This resulted in eight indications supported by only an NCCN category 2B recommendation.

Published clinical studies supporting these indications were assessed for study type (clinical trial Y/N, phase of clinical trial, randomization Y/N) and journal name in PubMed. Journal names were cross-referenced with the Centers for Medicare & Medicaid Services (CMS)-endorsed journal list.

SUMMARY

frequently meets the criteria identified in the Medicare statute.

RESULTS

Table. Non-FDA-approved Drug Indications with Only Category 2B Recommendations					
Drug(s)	Cancer Type	PubMed ID	Journal Name	Type of Study	Evidence Supported by CMS?
Vandetanib	Non-small cell lung cancer	27803005	Annals of Oncology	Phase 2 RCT	Υ
		27825616	Lancet Oncology	Non-randomized, Phase 2 Clinical Trial	Υ
		25881079	BMC Cancer (Biomed Central)	Phase 3 RCT	Ν
		25366691	Journal of Clinical Oncology	Case report	Ν
Eribulin	Uterine neoplasms - uterine sarcoma	21937277	Lancet Oncology	Non-randomized, Phase 2 Clinical Trial	Y
Cisplatin, Vinblastine, and Dacarbazine	Cutaneous melanoma	19001327	Journal of Clinical Oncology	Phase 3 RCT	Y
		25332243	Journal of Clinical Oncology	Phase 3 RCT	Υ
Talimogene laherparepvec and Ipilimumab	Cutaneous melanoma	26014293	Journal of Clinical Oncology	Phase 3 RCT	Y
		28981385	Journal of Clinical Oncology	Phase 2 RCT	Y
Binimetinib	Cutaneous melanoma	28284557	Lancet Oncology	Phase 3 RCT	Y
Docetaxel	Uterine neoplasms	16234823	British Journal of Cancer	Non-randomized Phase 2 Clinical Trial	Υ
Gemcitabine	Bladder	N/A	N/A	N/A	Ν
Gemcitabine, Docetaxel, and Capecitabine	Pancreatic	25492104	Cancer	Non-Randomized, Phase 2 Clinical Trial	Υ

Table: Seven out of 8 indications (87%) supported exclusively by a category 2B NCCN recommendation had at least one publication that met the evidentiary requirements for Medicare reimbursement, with 5 supported by a randomized clinical trial. RCT, Randomized Controlled Trial; Y/N, Yes/No; N/A, Not Available.

Among the non-FDA-approved drug indications for the 10 most common solid tumor types with only category 2B recommendations, 87% had at least one clinical trial publication in a designated CMS journal. These results suggest clinicians should consider pursuing the appeals process and provide supporting evidence in cases of claim denial. While coverage is not guaranteed, the evidence supporting 2B indications

Evaluation of other 2B indications is in progress and may support expanded coverage of these indications.

"TEMPUS