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ASCO / MASCC E-DELPHI EXPERT CONSENSUS GUIDANCE ON OPIOID ANALGESIC CONVERSIONS IN PATIENTS WITH CANCER-RELATED PAIN

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Introduction

Patients with cancer pain often need to be converted (“switched”/“rotated ”) from one opioid to another due to inadequate analgesia, intolerable adverse effects, or a variety of other reasons. “Equianalgesic” tables are available to support this process. Still, these are often based on single-dose studies (often in patients without cancer) and, importantly, do not take into consideration the myriad of factors that can affect the successful conversion from one opioid to another (e.g., pharmacodynamic/pharmacokinetic issues). This joint ASCO/MASCC initiative aimed to develop expert consensus guidance on the safe conversion between common opioid analgesics.

Methods

A modified eDelphi guideline approach was adopted based on ASCO recommendations and concurrent approval of MASCC to develop practice guidelines for opioid conversions (Loblaw, D JCO 2012). The eDelphi guideline consensus process (Figure 2, Table 1) involved answers to anonymous statements through Welpi (**Welpi** SEO Expert Los Angeles, Los Angeles, California) software acquired by MASCC. Statements were constructed by a steering group of 5 experts and resulted in 81 statements. The first of three eDelphi rounds involved anonymous responses and panelist comments, which were then reviewed by the steering committee and reconfigured to 86 statements. A consensus group of 27 internationally recognized pain and palliative care experts were recruited. Panelists before the first round and the consensus experts before the second round completed an ASCO conflict of interest form before participating in the eDelphi rounds.

Delphi Opioid Conversion Guideline Timeframe

Round#	Start Date	End Date	# days open
Round #1	Wednesday, Aug 9, 2023	Thursday, Aug 31, 2023	22
Round #2	Wednesday, Nov 15, 2023	Thursday, Dec 14, 2023	29
Round #3	Friday, Jan 12, 2024	Thursday, Feb 1, 2024	20

Results from a Scoping Systematic Review

Opioid	Morphine	Oxycodone	Hydromorphone	Tramadol	Fentanyl	Buprenorphine	Oxymorphone
Morphine		***1:1** (1.6:1-1:1.5)	**5:1** (5:1-9:1)	***1:11** (1:10-1:22)	**68:1** (100:1-43:1)	***33:1** (37.5:1-30:1)	**8.7:1** (3.38:1-10:1)
Oxycodone	***1:1** (1:1.5-1.6:1)		NA	**1:8-1:10**	**75:1** (100:1-50:1)	NA	NA
Hydromorphone	**1:5** (1:5-1:9)	NA		NA	**13:1-16:1**	NA	NA
Tramadol	***11:1** (1:10-1:22)	**8:1-10:1**	NA		**876:1-1000:1**	**>666:1**	**NA**
Fentanyl	**1:68** (1:43-1:100)	**1:75** (1:50-1:100)	**1:13-1:16**	**1:876-1:1000**		NA	**1:7.5**
Buprenorphine	***1:33** (1:30-1:37.5)	NA	NA	**< 1:666**	NA		NA
Oxymorphone	**1:8.7** (1:3.38-1:10)	NA	NA	**NA**	**7.5:1**	NA	

Opioid	Oral Morphine	Oral Oxycodone	Oral Hyromorphone	Oral Hydrocodone	Oral Tramadol	Oral Tapentadol	Transdermal Fentanyl	Transdermal Buprenorphine	Sublingual Bprenorphine	Oral Oxymorphone
Oral Morphine		***1.4:1** (1:1-2:1)	***5:1** (3.18:1-8:1)	**1.25:1 - 1.5:1**	**1:4** (1:2.6-1:10)	**1:3.3** (1:2.5-1:4.5)	**80:1** (118:1-57:1)	**107:1** (120:1-37:1	**50:1-53:1**	**1.8:1 - 3.5:1**
Oral Oxycodone	***1:1.4** (1:1-1:2)		**2.5:1** (1.6:1-4.8:1	***1:1.5** (1:1-1:2)	***1:10**	***1:5.8** (1:5-1:10)	**67:1** (150:1-29:1)	**45:1** (83:1-29.2:1)	**34:1**	***2:1-1.95:1**
Oral Hydromorphone	***1:5** (1:3.18-1:8)	**1:2.5** (1:1.6-1:4.8)		NA	NA	NA	NA	NA	NA	NA
Oral Hydrocodone	**1:1.25-1:1.5**	***1.5:1** (1:1-2:1)	NA		***1:7.5-1:7.6**	NA	NA	**62.5:1**	NA	NA
Oral Tramadol	**4:1** (2.6:1-10:1)	***10:1**	NA	***7.5:1 -7.6:1**		NA	NA	**650:1**	***500 :1**	NA
Oral Tapentadol	**3.3:1** (2.5:1-4.5:1)	***5.8:1** (5:1-10:1)	NA	NA	NA		**333:1-269:1**	**210:1-269:1**	NA	NA
Transdermal Fentanyl	**1:80** (1:118-1:57)	**1:67** (1:150-1:29	NA	NA	NA	**1:333-1:269**		***1:1.3** (1:1 1:1.4)	NA	NA
Transdermal Buprenorphine	**1:107** (1:120-1:37)	**1:45** (1:83-1:29.2)	NA	**1:62.5**	**1:650**	**1:210-1:269**	***1.3:1** (1:1-1.4:1)		NA	NA
Sublingual Buprenorphine	**1:50-1:53**	**1:34**	NA	NA	***1:500**	NA	NA	NA		NA
Oral Oxymorphone	**1:1.8-1:3.5**	***1:1.95-1:2**	NA	NA	NA	NA	NA	NA	NA	

*MASCC level and grade of evidence IIB- 2 randomized trials similar conversion ratios

Results

Thirty-eight worldwide experts completed all three rounds. Consensus was obtained for 16 statements relating to pre-conversion (assessment), 30 relating to the conversion process (including agreed conversion ratios), and 18 relating to post-conversion (re-assessment). A consensus was not achieved on conversions involving methadone, which reflects the different methods the experts used to initiate/discontinue this unique analgesic. Some statements did not reach a consensus due to experts’ unfamiliarity with specific analgesics/formulations (i.e., non-availability within their country).

Discussion

Our hope is to have two manuscripts. One on the results of the systematic review and one on the eDelphi guideline approved by panelists and by ASCO/MASCC, the AAHPM as a non-publishing organization, the HPNA as a non-publishing organization, and the National Italian Supportive Care Organization. We are hopeful that the 64 guideline statements that come out of this eDelphi guideline will set the stage for future trials and will be updated every 5 years. These guidelines should not be considered binding by governmental or licensing agencies but as recommendations that require updating periodically.

References

American Society of Clinical Oncology Clinical Practice Guidelines: Formal Systematic Review–Based Consensus Methodology D. Andrew Loblaw, Ann Alexis Prestrud, Mark R. Somerfield, Thomas K. Oliver, Melissa C. Brouwers, Robert K. Nam, Gary H. Lyman, and Ethan Basch, Journal of Clinical Oncology Volume 30, Number 25 https://doi.org/10.1200/JCO.2012.42.0489