



# HemOnc: A New Standard Vocabulary for Chemotherapy Regimen Representation in the OMOP Common Data Model

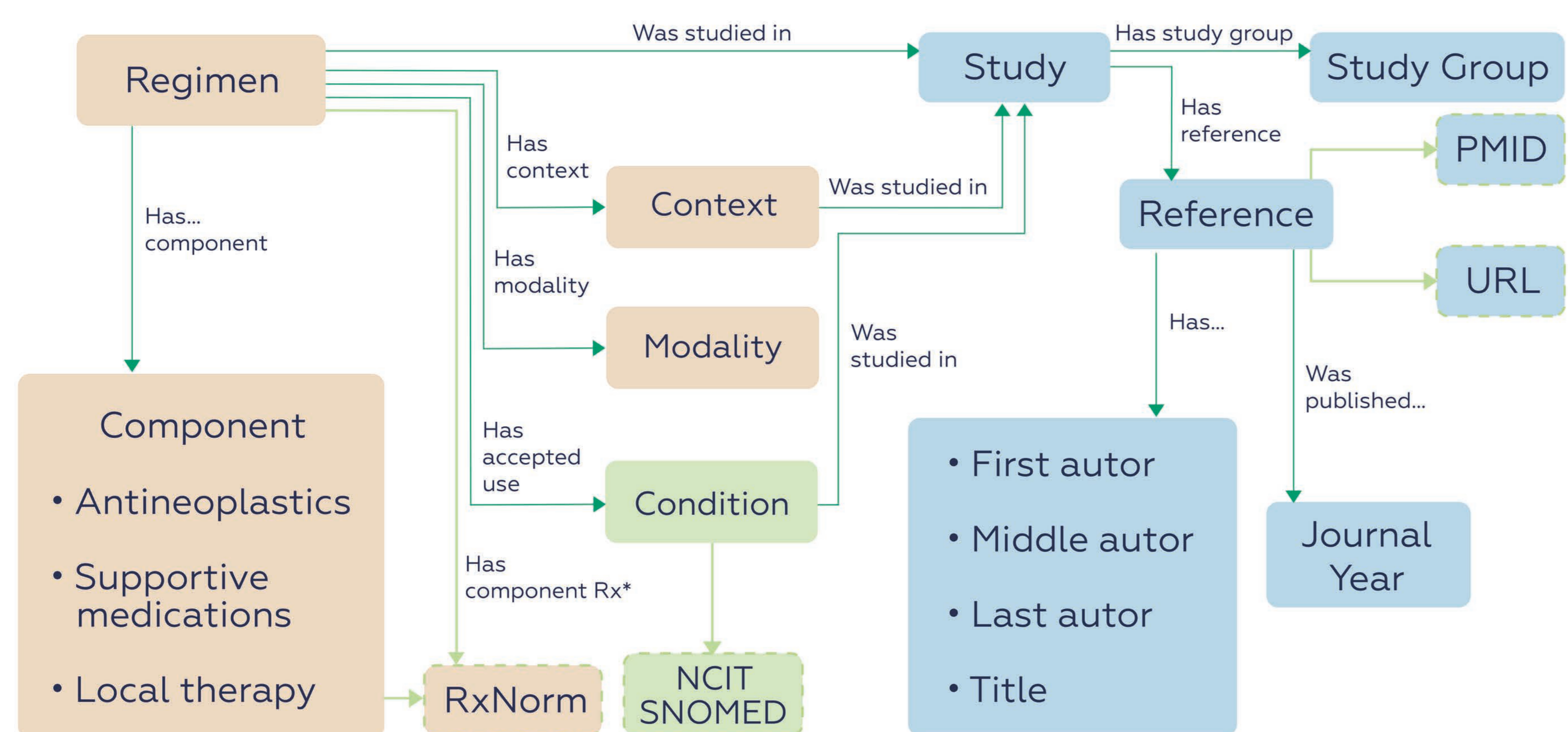
Jeremy L. Warner MD, MS, FAMIA<sup>1,2\*</sup>, Dmitry Dymshyts MD<sup>3</sup>, Christian G. Reich MD, Bsc<sup>4</sup>, Michael J. Gurley BA<sup>5</sup>, Harry Hochheiser PhD<sup>6</sup>, Zachary H. Moldwin BA<sup>7</sup>, Rimma Belenkaya MS, MA<sup>8</sup>, Andrew E. Williams PhD<sup>9</sup>, Peter C. Yang MD<sup>2,10</sup>, Tatiana Banokina<sup>3</sup>, Elizaveta Modina<sup>3</sup>, Natalia Karataeva<sup>3</sup>, Olga Osintseva<sup>3</sup>, Anastasios Siapos<sup>4</sup>

<sup>1</sup>Vanderbilt University Medical Center, Nashville, TN; <sup>2</sup>HemOnc.org LLC, Lexington, MA; <sup>3</sup>Odysseus Data Services, Inc., Cambridge, MA; <sup>4</sup>IQVIA, Cambridge, MA; <sup>5</sup>Northwestern University, Chicago, IL; <sup>6</sup>University of Pittsburgh, Pittsburgh, PA; <sup>7</sup>University of Illinois at Chicago College of Pharmacy, Chicago, IL; <sup>8</sup>Memorial Sloan Kettering Cancer Center, New York, NY; <sup>9</sup>Tufts University, Medford, MA; <sup>10</sup>Massachusetts General Hospital, Harvard Medical School, Boston, MA

## 1 MOTIVATION

- Chemotherapeutics are administered in complex combination protocol called "regimens"
- These are not well-represented in current systems, since they are fixed combinations of drugs in a predefined temporal order
- The HemOnc.org<sup>1</sup> and OHDSI Oncology Group<sup>2</sup> created the first OMOP-compatible vocabulary of chemotherapy regimen concepts, to be made available in the ATHENA<sup>3</sup>
- This work builds upon the prior HemOnc.org OWL ontology<sup>4,5</sup>

## 2 HEMONC REGIMEN DATA MODEL (SIMPLIFIED)



- Internal relationships (green arrow)
- External relationships (blue arrow)
- Included in first OHDSI releases (orange box)
- Third OHDSI release (planned) (green box)
- Future OHDSI releases (blue box)
- \*Has antineoplastic - RxNorm
- Has local therapy - RxNorm
- Has hormonal therapy - RxNorm
- Has supportive medication - RxNorm

## 3 COMPARISON OF SOURCES OF REGIMEN CONCEPTS

Terminology	Maps to Drugs	Disease Context	Treatment Context	Modality	Link to Evidence	Number of regimens
SNOMED-CT	Yes*	No	No	No	No	6
SEER*Rx	Yes*	No	No	No	No	513
NCI Thesaurus	Yes*	Yes	No	No	No	735
HemOnc	Yes	Yes	Yes	Yes	Yes	2 940

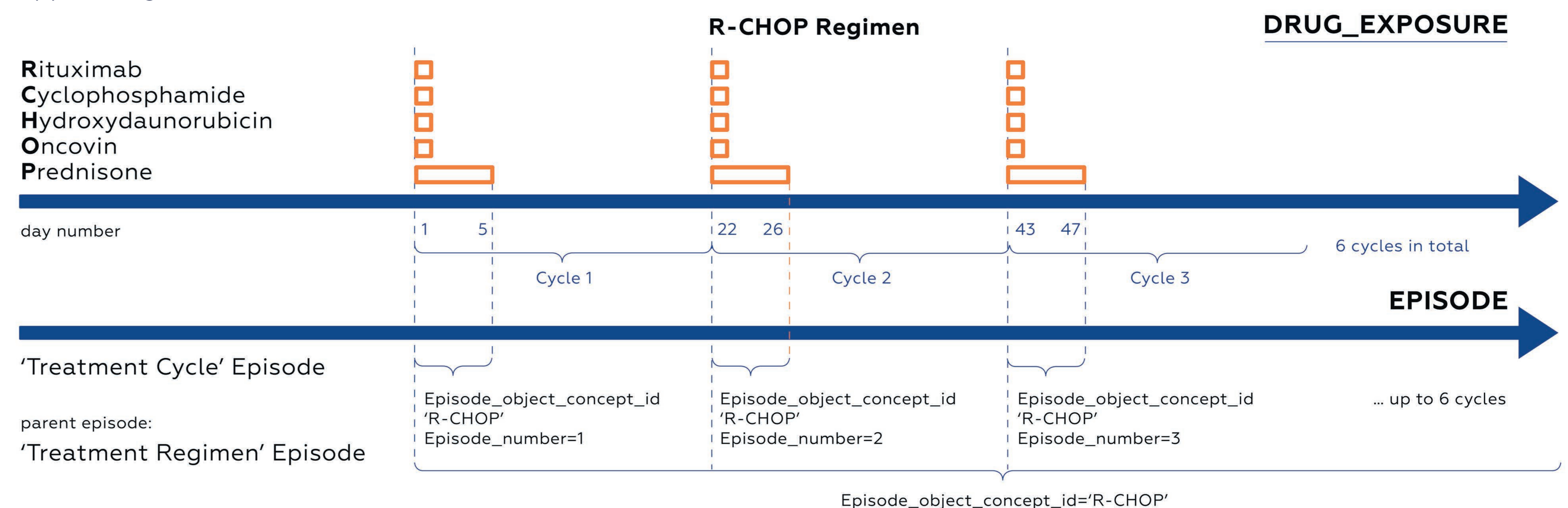
\*Antineoplastics; HemOnc also maps to supportive medications

## 4 IMPLEMENTATION

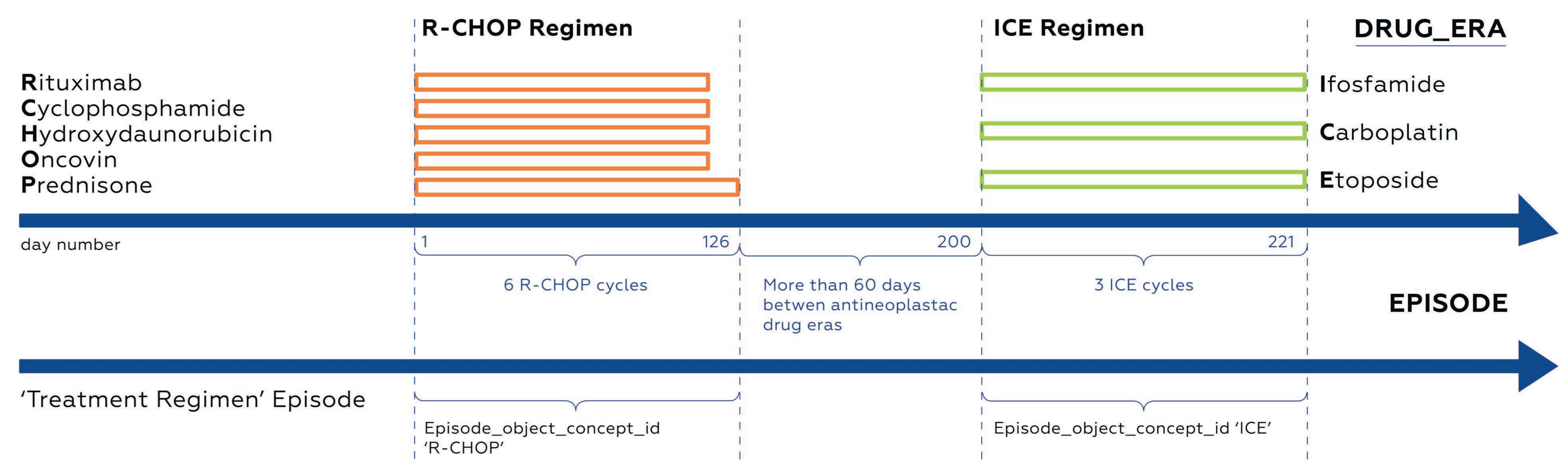
Episode table was introduced as a part of OMOP CDM Oncology Extension<sup>6</sup>

### 4.1 Cycle level Episodes

To build this we need to know drug administration schedule (which doesn't exist yet in the OMOP Vocabulary), but this approach gives more accurate results.



### 4.2 Regimen level Episodes



## Conclusion

HemOnc is the only comprehensive system which contains all factors needed that are used in DRUG\_EXPOSURE, DRUG\_ERA and EPISODE tables.

More details here



## References

- Warner et al. 2015 doi:10.1200/JOP.2014.001511  
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