
Poster

[P26-7] P26-7: Oncologic drugs (3): Pharmaometrics, PK/PD, special population

Chair: Shiro Fukumori, Japan

Tue. Sep 26, 2017 12:30 PM - 1:30 PM Annex Hall (1F)

(Tue. Sep 26, 2017 12:30 PM - 1:30 PM Annex Hall)

[P26-7-9] Beware, the suppliers do not always know what they sell: case report of delivered endoxifen isomers

Gerd Ackehed¹, Jennie Oestervall², Anna Hansson³, Anton Pohanka⁴, Olof Beck⁵ (1.Karolinska University Laboratory, 2.Karolinska University Laboratory, 3.Karolinska University Laboratory, 4.Karolinska University Laboratory, 5.Karolinska University Laboratory)

Keywords: endoxifen isomers, identification, validation

Background

During method development of a sensitive bioanalytical method for determination of tamoxifen and its metabolites (E)-endoxifen, (Z)-endoxifen, N-desmethyl tamoxifen and 4-hydroxy tamoxifen, reference substance named “endoxifen, predominantly Z-isomer” was ordered from Supplier A. When developing the chromatographic method, the retention order of (E)- and (Z)-endoxifen differed from earlier published data. Supplier A was then contacted, asking if they by mistake sent the wrong reference substance and after over a month they replied:

“This is a somewhat frustrating case, as we have to honestly admit that with feasible efforts, we will be not be able to clarify if the product is predominantly E or predominantly Z. We have relied on supplier data mainly when we set up the product - but we are unable to decide if the assignment of the supplier is correct. We will therefore change the product name to mixture of isomers only”

No intention to solve the confusion from Supplier A!

But we needed to know! Clarity was needed.

Methods

Ordering of reference substances from other suppliers. For analytical method see poster: New Effective and Sensitive Method for determination of Tamoxifen, N-desmethyl-tamoxifen, 4-OH-tamoxifen and Endoxifen in Human Plasma

Results

Supplier A: (Z)-endoxifen elutes first. Supplier B: For the first batch ordered, (E) endoxifen elutes last, confirming Supplier A. But when Supplier B then delivered another batch of the E-isomer, (E)-endoxifen eluted first, resulting in lack of trust for Supplier B, especially when the web page stated the following in a data sheet for one the batches:

” Endoxifen E-isomer is the E-isomer of (Z)-Endoxifen.”

Third attempt both the (E)- and (Z)-isomer was ordered from Supplier C, also asking for NMR proof for identification. *To be continued...*

Conclusions

You cannot always be sure to get the correct reference substance at least not for isomers.