How to handle the mapping of the eCRF form with the combined information

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ABSTRACT

When we do SDTM mapping, we may feel difficult to decide how to map those information which we don't see frequently. Then we map them to a farfetched domain. However it's not the best way to catch information when they can go to the specific domains separately. I will share my experience of how to handle the combined information form through one example. And we should be aware that understanding how the study collects the data is important for the mapping.

INTRODUCTION

SDTM provides a standard for organizing and formatting data to streamline processes in collection, management, analysis and reporting [1]. It's a required standard that we must to follow. However as it has multiple grey areas that are open to interpretation based on study design and analysis intentions [2], we may map the information differently. For some specific case, though there is no absolute right or wrong, we still need to think about if we map them in a better way.

MY UNDERSTANDING OF SDTM

My understanding of SDTM is like a bookshelf to category the data and put them into the different cells. Each cell is like a section of the story. We use these sections to compose a complete story and tell about the clinical trial to FDA. For instance we tell about Demographics in the DM domain, Adverse Event in the AE domain and concomitant medication in the CM domain, etc.. All domains compose the clinical trial and convey the study information. When we hear the story, we always wish the story is constituted by some logical elements rather than chaos. That is to say we don't wish to see the AE domain contains demographic information or CM domain contains medical history information. So when we do the mapping, good category helps to tell a good story.

BACKGROUND

As other big pharmaceutic companies, we have our data standard office (DSO). For all mapping questions, the data standard office will make decision. When we follow the DSO's guidance to do in-house studies, the mapping is straightforward. However when we support the out-source studies and see the difference, the work becomes challenge and make us think better.

EXAMPLE

There is an example in one of my studies. In the survival follow-up visit, the eCRF collected survival information, the tumor status, the treatment status and AE, SAE related questions. Our vendor mapped the whole form to the SC domain. It's simple to map the information to one domain as the eCRF contains too much information. However when we think about these information, we will know they don't belong to one category and there are more questions than the ones on the eCRF form.

生存随访

生存随访					
1 随访日期（年/月/日）	2 生存情况（如果受试者死亡，请填写死亡记录页）	3 肿瘤状态	4 是否有新的抗肿瘤治疗？	5 是否有特别关注的不良事件？	6 是否有与研究药物相关的严重不良事件？
20____/__/__/__/__	生存 □1 死亡 □2	CR □1 PR □2 SD □3 PD □4 未评估 □5	是* □1 否 □0	是* □1 否 □0	是* □1 否 □0
20____/__/__/__/__	生存 □1 死亡* □2	CR □1 PR □2 SD □3 PD □4 未评估 □5	是* □1 否 □0	是* □1 否 □0	是* □1 否 □0

Firstly we need to know:

1) Is this page only collected once?

2) If the patient is "Dead", there is no death date on the page - is this information collected elsewhere?

3) If the items 4, 5, 6 are ticked YES, is the additional information collected on separate pages (e.g. Adverse Event and Concomitant medication).

To answer these questions, we must to go through the eCRF pages and know about how the eCRF collects the data.

In this study, there are two pages of the survival follow-up forms. But each line in every page means a visit. If the patient is "Dead", there is another page collects the death information separately (as below indicated).

死亡

死亡日期： |__|__|__|__|/|__|__|/|__|__|
年 月 日
death date

死亡的主要原因 （仅需提供最主要的一个原因）：
Main reason to cause the death

1 ☐ 研究疾病 study disease

2 ☐ 毒性反应 toxic reaction

99 ☐ 其它 （请描述） other, specify

详细描述： _____
specify

_____

注：如果死亡是由于不良事件所导致，请记录至不良事件页。
if the death is due to AE, please record it in the AE form.

If items 4, 5, 6 are ticked YES, the additional information is also collected on separate pages (CM/ New Lesion Treatment form and AE form as below).

既往 / 伴随用药 / 新的抗肿瘤治疗 CM and New Lession Treatment

受试者在签署知情同意书前 6 个月内及研究过程中是否使用过除研究药物以外的药物？ 是* ☐1 否 ☐0 （* 如有，请在下表详细提供）

（包括：非甾体抗炎药或长效类固醇，降压药，抗凝剂，肝素，其他与不良事件发生或者处理有关的药物）

序号	Drug name 通用名 （每行仅限一条记录）	Dose 单次剂量	unit 剂量单位	frequence 每日用药频率 A	途径 route	开始 / 结束日期 （年 / 月 / 日） 如试验结束仍继续使用，请打勾 Start date/ End date / Ongoing	Indication code 适应症编号 B	Indication 适应症名称
1.						开始：|__|__|__|__|/|__|__|/|__|__| 结束：|__|__|__|__|/|__|__|/|__|__| ☐1		
2.						开始：|__|__|__|__|/|__|__|/|__|__| 结束：|__|__|__|__|/|__|__|/|__|__| ☐1		

不良事件

受试者在研究过程中是否发生不良事件？ 是* ☐1 否 ☐0 （* 如有，请在下表详细提供）

* 末次研究用药给药后 28 天内出现的新的 SAE/AE 和贝伐珠单抗末次给药后 6 个月内发生的特别关注不良事件都应记录在下表中。

序号	不良事件名称 （每行限填一个事件）	开始 / 结束日期 A （年 / 月 / 日） 例如：2012/6/5	结局 A 1= 死亡 2= 解决，无后遗症 3= 解决，有后遗症 4= 改善 5= 持续 6= 恶化 7= 未知	CTC AE 分级 B	与治疗药物的因果关系 0= 无 1= 有	对治疗药物的影响 1= 无变化 2= 药物减量 3= 药物延迟 4= 药物暂停 5= 药物停用	对不良事件采取的措施 1= 无 2= 药物治疗 3=非药物治疗 99= 其它	如选 '99'，请描述	是否为特别关注的不良事件？ 0= 否 1= 是*	SAE? 0= 否 1= 是*	是否因此退出研究？ 0= 否 1= 是
1.		开始：____/____/____ 结束：____/____/____			贝伐珠单抗 ☐0 ☐1 5-FU ☐0 ☐1 CF ☐0 ☐1 L-OHP ☐0 ☐1 CPT-11 ☐0 ☐1 其它 ☐0 ☐1	贝伐珠单抗 ☐1 ☐2 ☐3 ☐4 ☐5 5-FU ☐1 ☐2 ☐3 ☐4 ☐5 CF ☐1 ☐2 ☐3 ☐4 ☐5 L-OHP ☐1 ☐2 ☐3 ☐4 ☐5 CPT-11 ☐1 ☐2 ☐3 ☐4 ☐5 其它 ☐1 ☐2 ☐3 ☐4 ☐5					
2.		开始：____/____/____ 结束：____/____/____			贝伐珠单抗 ☐0 ☐1 5-FU ☐0 ☐1 CF ☐0 ☐1 L-OHP ☐0 ☐1 CPT-11 ☐0 ☐1 其它 ☐0 ☐1	贝伐珠单抗 ☐1 ☐2 ☐3 ☐4 ☐5 5-FU ☐1 ☐2 ☐3 ☐4 ☐5 CF ☐1 ☐2 ☐3 ☐4 ☐5 L-OHP ☐1 ☐2 ☐3 ☐4 ☐5 CPT-11 ☐1 ☐2 ☐3 ☐4 ☐5 其它 ☐1 ☐2 ☐3 ☐4 ☐5					

So based on the information we got, we can decide the first two questions (the survival follow-up date and the survival status) should be mapped to SS (Subject Status) domain (If this page is only collected once, we may consider to map it to DS domain.).

Items 4, 5, 6 won't be mapped since further information will be captured on the separate pages, where the information will be mapped.

For the tumor status, more questions related to the patient's response needed to be considered, e.g. is it an OVERALL RESPONSE or BEST RESPONSE or is it an EVALUATION OF LESIONS (e.g. TARGET/ NON TARGET / NEW LESION)?

In this study, we have already had the other eCRF forms to collect the Tumor Assessment for TARGET, NON-TARGET, NEW Lesion and OVERALL RESPONSE. If each lesion has already collected the OVERALL RESPONSE and is mapped to the RS domain, we need to map this question to FA domain. Otherwise we need to think about why we collect the "Tumor Status" on the Survival Follow-up Form? After clarifying with the Data Manager, we know the "Tumor Status" is an OVERALL RESPONSE and the same other OVERALL RESPONSE in the treatment cycles. So the data finally goes to RS (Response) domain.

肿瘤评估 Tumor Assessment　　未做 ☐ 98

本次随访是否在外科手术后？ 是 ☐ 1　以下肿瘤评估请基于术后四周的病灶评估结果
否 ☐ 0　以下肿瘤评估请基于筛选期的病灶评估结果

肿瘤评估 （靶病灶） Target Lesion

病灶编号	病灶部位		评估日期（年 / 月 / 日）	评估方法		最长直径或淋巴结短轴（mm）	病灶状态 B
	器官编码 A	部位描述（顺序和描述需与筛选期保持一致）		1=螺旋CT; 2= 常规 CT; 3= MRI; 99= 其它	如为 "99= 其它"，请描述测量方法		
1.						☐☐☐	
2.						☐☐☐	

肿瘤评估 （非靶病灶） Non-Target Lesion

病灶编号	病灶部位		评估日期（年 / 月 / 日）	评估方法		病灶状态 B
	器官编码 A	部位描述（顺序和描述需与筛选期保持一致）		1=螺旋CT; 2= 常规 CT; 3= MRI; 99= 其它	如为 "99= 其它"，请描述测量方法	
1.						
2.						

肿瘤新病灶 New Lesion　　未做 ☐ 98

自上次评估以来，是否发现新病灶？是* ☐ 1　否 ☐ 0

* 如是，请提供病灶发现日期：|__|__|__|__|/|__|__|/|__|__|
年　月　日

病灶部位：（请提供编码）
1._____　2._____
3._____　4._____

肿瘤总体评估 OVERALL RESPONSE		未做 ☐ 98
注：请基于 RECIST 标准 1.1 版进行以下评估：		
肿瘤靶病灶评估结果：	☐ 1 CR （完全缓解） ☐ 2 PR （部分缓解） ☐ 3 SD （稳定病灶） ☐ 4 PD （疾病进展） ☐ 5 NE （不能评价）	
肿瘤非靶病灶评估结果：	☐ 1 CR （完全缓解） ☐ 2 Non-CR/Non-PD （非缓解 / 非进展） ☐ 3 PD （疾病进展） ☐ 4 NE （不能评价）	
总体评估	☐ 1 CR （完全缓解） ☐ 2 PR （部分缓解） ☐ 3 SD （稳定病灶） ☐ 4 PD （疾病进展） ☐ 5 NE （不能评价）	
CR 或 PR 获得确认？	是 ☐ 1 否 ☐ 0 不适用 ☐ 97	

Below is the annotation of this page.

生存随访

SS	生存随访	SSORRES, SSTEST="Survival Status"		Not submitted	Not submitted	Not submitted
	随访日期（年 / 月 / 日） SSDTC	生存情况（如果受试者死亡，请填写死亡记录页）	RS 肿瘤状态 RSORRES, RSTEST="Overall Response"	是否有新的抗肿瘤治疗？	是否有特别关注的不良事件？	是否有与研究药物相关的严重不良事件？
	20I__I__I/I__I__I/I__I__I	生存 ☐ 1 死亡 ☐ 2	CR ☐ 1 PR ☐ 2 SD ☐ 3 PD ☐ 4 未评估 ☐ 5	是* ☐ 1 否 ☐ 0	是* ☐ 1 否 ☐ 0	是* ☐ 1 否 ☐ 0
	20I__I__I/I__I__I/I__I__I	生存 ☐ 1 死亡* ☐ 2	CR ☐ 1 PR ☐ 2 SD ☐ 3 PD ☐ 4 未评估 ☐ 5	是* ☐ 1 否 ☐ 0	是* ☐ 1 否 ☐ 0	是* ☐ 1 否 ☐ 0

CONCLUSION

When we have different ways to map the data, the better way is classification and putting the same kind of information together. If the information repeats, we don't need to map them again. However if they are not the duplicated information and belong to some theme, we should put them into the same topic. Therefore understanding how the study collects the data is important for the mapping.

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REFERENCES

[1] CDISC Website. Available at http://www.cdisc.org/sdtm

[2] Susan H.M. Boquist, PAREXEL, Billerica, MA Adam J. Sicard, PAREXEL, Durham, NC. "It is a standard, so it is simple, right?": Misconceptions and Organizational Challenges of Implementing CDISC at a CRO. PharmaSUG 2016 - Paper DS06. Available at http://www.lexjansen.com/pharmasug/2016/DS/PharmaSUG-2016-DS06.pdf

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