



# Using Boolean Functions to Excel at Validation Tracking (Paper QT-021)

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- 2017: Converting Non-Imputed Dates for SDTM Data Sets With PROC FCMP
- 2019: Making the Days Count: Counting Distinct Days in Overlapping or Disjoint Date Intervals
- 2020: Text Wrangling with Regular Expressions: A Short Practical Introduction
- 2021: Annotating CRFs More Efficiently (co-authored with B. Shivakumar)
- 2022: Using Boolean Functions to Excel at Validation Tracking (QT-021)
- 2022: Bookmarking CRFs More Efficiently (EP-096)



# Using Boolean Functions to Excel at Validation Tracking

Paper QT-021

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SDC

# Using Boolean Functions to Excel at Validation Tracking (Paper QT-021)

	A	B	C	D	E	F	G	H
1				SDTM	ADs	Tables	Listings	Figures
2								
3	All		Number of Outputs Planned	56	12	76	34	20
4								
5		Since Start of Study	Number of Outputs Ready	56	12	74	30	1
6			Number Validated (not necessarily Passed)	56	12	50	29	0
7			Number Passed	56	12	41	20	0
8								
9		Since Reference Date	Number of Outputs Ready (on or after reference date)	56	12	74	30	1
10			Number Validated after Primary Completion Date and Reference Date	56	12	38	13	0
11			Number Passed after Primary Completion Date and Reference Date	56	12	35	10	0
12								
13								
14	Topline		Number of Topline Outputs Planned			52	24	2
15								
16		Since Start of Study	Number of Topline Outputs Ready			52	24	1
17			Number of Topline Validated (not necessarily Passed)			50	24	0
18			Number of Topline Passed			41	20	0
19								
20		Since Reference Date	Number of Topline Outputs Ready (on or after reference date)			52	24	1
21			Number of Topline Validated after Primary Completion Date and Reference Date			38	11	0
22			Number of Topline Passed after Primary Completion Date and Reference Date			35	10	0
23								
24								
25	Reference Date			11/30/2021	12/31/2021	1/31/2022	1/31/2022	1/31/2022

# Using Boolean Functions to Excel at Validation Tracking (Paper QT-021)

A	B		G		M	N
Table Number	Topline	...	Primary Completion Date	...	Validation Date	Pass/Issues
14.1.1.1	Y		01JAN2022		01MAR2022	Pass

## Counting rows satisfying a single criteria

- # primary outputs completed
- # outputs validated

## Counting rows satisfying multiple criteria

- # *topline* primary outputs completed
- # outputs validated *on or after primary completion date*



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Counting rows satisfying a single criteria

- # primary outputs completed

A	B		G
Table Number	Topline	...	Primary Completion Date
14.1.1.1	Y		01JAN2022

BAF = Boolean Array Function

BAF1: Check if a cell is not blank

= SUM( IF(ISBLANK(Tables!\$G\$2:\$G\$777), 0, 1) )

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Counting rows satisfying multiple criteria

- # *topline* primary programs completed

A	B		G
Table Number	Topline	...	Primary Completion Date
14.1.1.1	Y		01JAN2022

BAF1: Check if a cell is not blank

BAF5: Check if a primary output is indicated as a topline output

= SUM( IF(ISBLANK(Tables!\$G\$2:\$G\$777), 0, 1)  
\* IF(Tables!\$B\$2:\$B\$777="Y", 0, 1) )

# Using Boolean Functions to Excel at Validation Tracking (Paper QT-021)

Counting rows  
satisfying a single  
criteria

- # outputs validated

	G		M	N
...	Primary Completion Date	...	Validation Date	Pass/ Issues
	01JAN2022		01MAR2022	Pass

BAF2: Check if a cell has the substring "Pass" (case insensitive).

= SUM( ISNUMBER(SEARCH("Pass", Tables!\$N\$2:\$N\$777)) )



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Counting rows  
satisfying  
multiple criteria

- # outputs validated *on or after primary completion date*

	G		M	N
...	Primary Completion Date	...	Validation Date	Pass/Issues
	01JAN2022		01MAR2022	Pass

BAF2: Check if a cell has the substring "Pass" (case insensitive).

BAF4: Check if the validation date is on or after the primary date.

= SUM( ISNUMBER(SEARCH("Pass", Tables!\$N\$2:\$N\$777))  
\* IF(ISERROR(DATEDIF(Tables!\$G\$2:\$G\$777,  
Tables!\$M\$2:\$M\$777, "d")), 0, 1) )



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Thank you for your time and attention!

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