Dataset Integrity Check for A Phase I/IIa Trial of Intravenous Immunoglobulin (IVIG) Therapy Following Portoenterostomy in Infants with Biliary Atresia (PRIME) Study

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Contents

1 Standard Disclaimer

The intent of this DSIC is to provide confidence that the data distributed by the NIDDK repository is a true copy of the study data. Our intent is not to assess the integrity of the statistical analyses reported by study investigators. As with all statistical analyses of complex datasets, complete replication of a set of statistical results should not be expected in secondary analysis. This occurs for a number of reasons including differences in the handling of missing data, restrictions on cases included in samples for a particular analysis, software coding used to define complex variables, etc. Experience suggests that most discrepancies can ordinarily be resolved by consultation with the study data coordinating center (DCC), however this process is labor-intensive for both DCC and Repository staff. It is thus not our policy to resolve every discrepancy that is observed in an integrity check. Specifically, we do not attempt to resolve minor or inconsequential discrepancies with published results or discrepancies that involve complex analyses, unless NIDDK Repository staff suspect that the observed discrepancy suggests that the dataset may have been corrupted in storage, transmission, or processing by repository staff. We do, however, document in footnotes to the integrity check those instances in which our secondary analyses produced results that were not fully consistent with those reported in the target publication.

2 Study Background

The PRIME study was a multicenter prospective phase 1/2A open label trial, aimed at assessing the feasibility, tolerability, and safety of intravenous immunoglobulin (IVIG) therapy following hepatic portoenterostomy (HPE) in infants with biliary atresia (BA). After enrollment, participants received three intravenous doses of IVIG at designated intervals over the first 60 days following HPE and were followed for 360 days. All infants in this trial were also treated with standardized doses of other routine standard-of-care treatments for BA and this routine clinical care was not modified by participation in this study.

3 Archived Datasets

A full listing of archived datasets included in the package can be found in the Roadmap document. All data files, as provided by the Data Coordinating Center (DCC), are located in the PRIME folder in the data package. For this replication, variables were taken from the “prime_derived_data.sas7bdat” dataset.

4 Statistical Methods

Analyses were performed to replicate results for the data in the publication by Kim et al. [1]. To verify the integrity of the data, only descriptive statistics were computed.

5 Results

For Table 1 in the publication [1], Patient Cohort, Table A lists the variables that were used in the replication, and Table B compares the results calculated from the archived data files to the results in Table 1. The results of the replication are within expected variation to the published results.

6 Conclusions

The NIDDK Central Repository is confident that the PRIME data files to be distributed are a true copy of the study data.

7 References

[1] Kim S, Moore J, Alonso E, Bednarek J, Bezerra JA, Goodhue C, Karpen SJ, Loomes KM, Magee JC, Ng VL, Sherker AH, Smith C, Spino C, Venkat V, Wang K, Sokol RJ, Mack CL. Correlation of Immune Markers With Outcomes in Biliary Atresia Following Intravenous Immunoglobulin Therapy. Hepatology Communications, 3(5), 685-696, March 2019. doi: https://doi.org/10.1002/hep4.1332

Table A: Variables used to replicate Table 1 – Patient Cohort

Table Variable	**dataset.variable**
Age at HPE	prime_derived_data.age_at_hpe
Female	prime_derived_data.gender
Race	prime_derived_data.race
Ethnicity	prime_derived_data.ethnicity

Table B: Comparison of values computed in integrity check to reference article Table 1

Baseline Demographics	**Publication (n=29)**	**DSIC (n=30)**	**Diff. (n=1)**
Age at HPE, days (mean ± SD)	60 ± 19	61 ± 20	1 ± 1
Age at HPE, n (%)			
≤ 30 days	2 (7)	2 (7)	0 (0)
> 30 to ≤ 45 days	5 (17)	5 (17)	0 (0)
> 45 to ≤ 60 days	7 (24)	7 (23)	0 (1)
> 60 to ≤ 90 days	14 (48)	14 (47)	0 (1)
> 90 to ≤ 120 days	1 (3)	2 (7)	1 (4)
Female, n (%)	18 (62)	18 (60)	0 (2)
Race, n (%)			
White/Caucasian	22 (76)	23 (77)	1 (1)
Black/African American	3 (10)	3 (10)	0 (0)
Asian	2 (7)	2 (7)	0 (0)
Refused/Not reported	2 (7)	2 (7)	0 (0)
Ethnicity, n (%)			
Hispanic	9 (31)	9 (30)	0 (1)
Non-Hispanic	20 (69)	21 (70)	1 (1)

Attachment A: SAS Code

```
libname prime "X:\NIDDK\niddk-dr_studies6\PRIME\private_created_data\PRIME_V1\Data";

/***************/
/* PRIME DSIC */
/***************/

data derived; set prime.prime_derived_data;
run;

*age;
proc means data=derived n mean std;
var age_at_hpe;
run;

*age category;
data one; set derived;
if age_at_hpe <=30 then created_age_cat = 0;
if age_at_hpe > 30 AND age_at_hpe <= 45 then created_age_cat = 1;
if age_at_hpe > 45 AND age_at_hpe <= 60 then created_age_cat = 2;
if age_at_hpe > 60 AND age_at_hpe <= 90 then created_age_cat = 3;
if age_at_hpe > 90 AND age_at_hpe <=120 then created_age_cat = 4;
run;

proc freq data=one;
tables created_age_cat/missing;
run;

*female sex;
proc freq data=derived;
tables gender;
run;

*race;
proc freq data=derived;
tables race;
run;

*ethnicity;
proc freq data=derived;
tables ethnicity;
run;
```