

## FAST TRACKING FOR THE CLINICAL SCIENTIST USING SAS\* SOFTWARE

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### ABSTRACT

Clinical trial record keeping is one of the most important aspects for the success of the study, as well as being very time-consuming. The clinical scientist must monitor the progress of the study at periodic intervals. This situation requires that information concerning the investigating physicians, study coordinators, regional clinical associates, and the study patients be assembled in an efficient manner for quick and precise information retrieval. A certain amount of information can be monitored during a double-blind clinical trial. Keeping track of patient status and study finances can be done by the clinical scientist using a combination of basic SAS\* software procedures. Much of the information can be immediately scanned after sorting and outputting it by study attributes. Legible output that does not require decoding by the clinical scientist is a must.

### INTRODUCTION

In clinical studies of investigational drugs, clinical scientists or their counterparts require immediate and easy access to large numbers of study and financial records. Some basic SAS\* procedures offer the means to implement this requirement. PROC SORT, PROC PRINT, PROC FORMAT, and PROC GCHART are used to produce appropriate output.

### DISCUSSION

By the proper identification of the observations of all data sets which contain the demographic and procedural information, mainframe users may create hardcopy that can be used to convey desired facts quickly. This syntax is intended as the prelude to a menu-driven program using SAS/AF\* software, thus creating a "user-friendly" environment for even the "computerphobic". Simple annotation of program syntax makes the generation of output easy for users with a brief acquaintance with SAS\* software. This syntax may also be used with SAS\* software for the PC.

Currently there are four printed output panels and one graphic display. PROC PRINT, the PUT statement for "pretty printing", and the HVAR feature of PROC GCHART were used to create these panels.

The first of these panels lists the investigating physician's identification including the protocol number, his/her name, professional address, telephone number, the study coordinator(s), and subinvestigator(s).

The second of the panels lists the patient's demography by protocol and investigator. Patient number, patient's initials, date of birth, and sex are given in this program. These current examples use previous patients who were transferred from one protocol to another; therefore the panel contains the patient's previous investigational history.

A schedule of patient visits can be predetermined for a long-term study. Such a schedule is displayed in the third panel. It includes the patient's identification along with enrollment date, proposed visit dates, actual visit dates, and the difference (in days) between the two visit dates.

Current patient enrollment is often requested by study monitors. Hardcopy, both in printed and graphic form, easily supplies the desired information. In both cases, the enrolled, active, and discontinued study patient totals are presented in easily read fashion.

The development of the financial records panel is in progress.

### CONCLUSION

This program is preliminary to a final menu-driven presentation using SAS/AF\* software. Such a format will allow easy access to both novice and experienced SAS\* software users.

### REFERENCES

SAS Institute Inc. SAS\* User's Guide: Basics, Version 5 Edition. Cary, NC: SAS Institute Inc., 1985. 1290 pp.

SAS Institute Inc. SAS/GRAPH\* User's Guide: Version 5 Edition. Cary, NC: SAS Institute Inc., 1985. 596 pp.

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```

3      * SUGI14 PROGRAM
4      ;
5      OPTIONS ERROR=0;
6      MACRO DISPLAY
7      DATA NULL_ ; SET;
8      FILE PRINT HEADER=H LINESLEFT=LNLF N=PAGE SIZE;
9      BY PROTOCOL INVNO TYPE PATNO VISITNO;
10     TALLY=KOUNT+2;
11     IF FIRST.PATNO AND LNLF<TALLY THEN DO;
12     PUT _PAGE_;
13     PUT @10 PROTOCOL 3. +5 INVNAME NAME. +1 INVNO 5. @;
14     END;
15     IF NOT FIRST.INVNO THEN GO TO NEXT;
16     PUT @10 PROTOCOL 3. +5 INVNAME NAME. +1 INVNO 5. @;
17     NEXT: IF NOT FIRST.PATNO THEN GO TO NEXT1;
18     PUT @37 VISITNO 2.
19     @42 'PATIENT NUMBER: ' PATNO $CHAR3. +1
20     ' PATIENT'S INITIALS: ' INITS $CHAR3. +1
21     ' DATE OF ENROLLMENT: ' ENROLDTE DATE7. ;
22     NEXT1: IF VISITNO>0;
23     IF VISITNO>1 THEN GO TO NEXT2;
24     PUT @47 'PROPOSED VISIT DATE' +3
25     'ACTUAL VISIT DATE' +3
26     'DIFFERENCE (IN DAYS)';
27     NEXT2:
28     PUT @37 VISITNO 2.
29     @52 PVSTDATE DATE7.
30     @72 AVSTDATE DATE7.
31     @98 DAYSDIFF 3.
32     ;
33     IF LAST.PATNO THEN PUT /;
34     RETURN;
35     H:
36     PUT @7 'PROTOCOL' @20 'INVESTIGATOR' @35 'VISIT' /
37     @20 'NAME & NUMBER' @35 'NUMBER' //;
38     RETURN;
39     %
40
NOTE: FORMAT NAME HAS BEEN OUTPUT.
NOTE: FORMAT $PDG HAS BEEN OUTPUT.
40     PROC FORMAT;
41     VALUE NAME 48922='PILLPUSHER'
42     48927='SAWBONES'
43     ;
44     VALUE $PDG '052'='THERAPY A '
45     '101'='THERAPY Z '
46     ;
NOTE: FORMAT RSN HAS BEEN OUTPUT.
47     VALUE RSN 1='ADVERSE EXPERIENCE'
48     2='PATIENT REQUEST'
49     3='PATIENT'S DEATH'
50     4='INTERCURRENT ILLNESS'
51     5='LOST TO FOLLOW-UP'
52     0=' '
53     ;
54     *****
55     *
56     * DESCRIPTION OF VARIABLES INPUT BY PROGRAM
57     *
58     * TYPE: OBSERVATION TYPE
59     * INTYPE: SUBTYPE WITHIN OBSERVATION TYPE
60     * INVNO: INVESTIGATOR NUMBER
61     * INFO: INVESTIGATOR DEMOGRAPHICS INCLUDING
62     * INVESTIGATOR NAME
63     * ADDRESS AND TELEPHONE NUMBER
64     * STUDY COORDINATOR
65     * SUBINVESTIGATOR
66     *
67     * PATNO: PATIENT NUMBER
68     * RNDCCOE: RANDOMIZATION CODE
69     * INITS: PATIENT'S INITIALS
70     * PREPRTNO: PREVIOUS PROTOCOL NUMBER
71     * PREPATNO: PREVIOUS PATIENT NUMBER
72     * PREINVNO: PREVIOUS INVESTIGATOR NUMBER
73     * PRVDRG: PREVIOUS DRUG
74     * PROGRDSE: PREVIOUS DRUG DOSE
75     * BDATE: DATE OF BIRTH
76     * SX: SEX OF PATIENT
77     * D: DISCONTINUATION STATUS
78     * REASON: REASON FOR PREMATURE DISCONTINUATION
79     *
80     * VISITNO: VISIT NUMBER
81     * PVD: PROPOSED VISIT DATE
82     * AVD: ACTUAL VISIT DATE
83     *
84     *****
85     ;
86     TITLE1 'FAST-TRACKING FOR THE CLINICAL SCIENTIST USING SAS(R) SOFTWARE';
87     TITLE2 'SUGI14, SAN FRANCISCO, 1989';
88     TITLE3 ;
89     TITLE4 ;
NOTE: THE PROCEDURE FORMAT USED 0.16 SECONDS.

```

```

90 DATA ENTRY;
91 INFILE CARDS MISSEVER;
92 INPUT TYPE 1-2 @;
93 IF TYPE<4 THEN LINK TYPE1_3;
94 IF TYPE=4 THEN LINK TYPE4;
95 IF TYPE=5 THEN LINK TYPE5;
96 PROTOCOL=INT(INVNO/100);
97 INVNAME=INVNO;
98 FORMAT INVNAME NAME.;
99 OUTPUT: RETURN;
100 TYPE1_3: INPUT INTYPE 3-4 INVNO 6-10 INFO $ 11-72;
101 RETURN;
102 TYPE4: INPUT INTYPE 3-4 INVNO 6-10
103 PATNO $ 12-14 RNCODE 16-19 INITS $ 21-23
104 PREPRNO 25-27 PREPATNO $ 31-33 PREINVNO 35-39
105 PRVDRG $ 41-43 PRDRGSE 45-49 @50 BDATE MMDYY6. SX $ 57
106 D $ 59 REASON 61-62;
107 BIRTHDAY = BDATE;
108 IF D='Y' THEN DISCNTN='YES';
109 ELSE DISCNTN='NO';
110 FORMAT BIRTHDAY DATE7. REASON RSN. PRVDRG $PDG.;
111 RETURN;
112 TYPE5: INPUT INTYPE 3-4 INVNO 6-10
113 PATNO $ 12-14 RNCODE 16-19 INITS $ 21-23
114 VISITNO 25-26 @28 PVD MMDYY6. @35 AVD MMDYY6.;
115 IF VISITNO=0 THEN ENROLTE=AVD;
116 IF ABS(AVD)>0 AND ABS(PVD)>0 THEN
117 DAYSDIFF=AVD-PVD;
118 PVSTDATE = PVD;
119 AVSTDATE = AVD;
120 RETAIN ENROLTE;
121 FORMAT PVSTDATE DATE7. AVSTDATE DATE7. ENROLTE DATE7.;
122 RETURN;
123 CARDS;

```

NOTE: DATA SET WORK.ENTRY HAS 113 OBSERVATIONS AND 27 VARIABLES. 198 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.08 SECONDS.

```

237 PROC SORT DATA=ENTRY;
238 BY PROTOCOL INVNO TYPE INTYPE;

```

NOTE: 4 CYLINDERS DYNAMICALLY ALLOCATED ON SYSDA FOR EACH OF 3 SORT WORK DATA SETS.  
NOTE: DATA SET WORK.ENTRY HAS 113 OBSERVATIONS AND 27 VARIABLES. 198 OBS/TRK.  
NOTE: THE PROCEDURE SORT USED 0.19 SECONDS.

```

239 DATA ENTRY1_3; SET ENTRY;
240 BY PROTOCOL INVNO TYPE INTYPE;
241 IF TYPE<4;
242 KEEP PROTOCOL INVNO INVNAME TYPE INTYPE INFO;
243 /*
244 PROC PRINT DATA=ENTRY1_3 NOOBS SPLIT=1;
245 TITLE1 ' ';
246 LABEL INFO=' ' /
247 INVNAME='INVESTIGATOR' NAME'
248 ;
249 BY PROTOCOL INVNO;
250 ID PROTOCOL INVNO;
251 VAR INFO;
252 RUN;
253 /*

```

NOTE: DATA SET WORK.ENTRY1\_3 HAS 17 OBSERVATIONS AND 6 VARIABLES. 442 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.05 SECONDS.

```

254 DATA MAKENICE; SET ENTRY1_3; FILE PRINT HEADER=H;
255 BY PROTOCOL INVNO TYPE INTYPE;
256 TITLE4 'PROFILE OF INVESTIGATING PHYSICIAN(S)';
257 TITLES ' ';
258 IF NOT FIRST.INVNO THEN GO TO NEXT;
259 PUT @13 PROTOCOL 3. @27 INVNO 5. @;
260 NEXT:
261 PUT @40 INFO $CHAR62.;
262 IF LAST.TYPE THEN PUT /;
263 RETURN;
264 H:
265 PUT @10 'PROTOCOL' @23 'INVESTIGATOR' /
266 @26 'NUMBER' //;
267 RETURN;

```

NOTE: 19 LINES WERE WRITTEN TO FILE PRINT.  
NOTE: DATA SET WORK.MAKENICE HAS 17 OBSERVATIONS AND 6 VARIABLES. 442 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.05 SECONDS AND PRINTED PAGE 1.

```

268 DATA ENTRY4; SET ENTRY;
269 BY PROTOCOL INVNO TYPE INTYPE;
270 IF TYPE=4;
271 IF SX='F' THEN SEX='FEMALE'; ELSE SEX='MALE';
272 KEEP PROTOCOL INVNO TYPE INTYPE PATNO RNCODE INITS PREPRNO PREPATNO
273 INVNAME PRVDRG
274 PREINVNO PRDRGSE BDATE REASON SEX BIRTHDAY DISCNTN;
275 /*
276 PROC PRINT DATA=ENTRY4 NOOBS;
277 /*

```

NOTE: DATA SET WORK.ENTRY4 HAS 13 OBSERVATIONS AND 10 VARIABLES. 386 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.05 SECONDS.

```
278 PROC SORT DATA=ENTRY4;  
279 BY PROTOCOL INVNO TYPE INTYPE PATNO;
```

NOTE: DATA SET WORK.ENTRY4 HAS 13 OBSERVATIONS AND 10 VARIABLES. 386 OBS/TRK.  
NOTE: THE PROCEDURE SORT USED 0.14 SECONDS.

```
280 DATA PRETTY4; SET ENTRY4;  
281 FILE PRINT HEADER=H LINESLEFT=LNLFT N=PAGESIZE;  
282 BY PROTOCOL INVNO TYPE INTYPE PATNO;  
283 TITLE4 'DEMOGRAPHIC HISTORY OF STUDY PATIENTS';  
284 TITLES ' ';  
285 DOSAGE=LEFT(PUT(PDRGDSE,4.));  
286 IF NOT FIRST.INVNO THEN GO TO NEXT;  
287 PUT @13 PROTOCOL 3. +5 INVNAME NAME. +1 INVNO 5. @;  
288 NEXT:  
289 PUT @40 'PATIENT NUMBER: ' PATNO $CHAR3. +1  
290 ' PATIENT'S INITIALS: ' INITS $CHAR3. +1  
291 ' DATE OF BIRTH: ' BIRTHDAY DATE7. +1 ' SEX: '  
292 ' SEX $CHAR6. ;  
293 PUT / @45 'RANDOMIZATION CODE: ' RNDCODE 5. /  
294 @45 'PREVIOUS PROTOCOL NUMBER: ' PREPRTNO 3. /  
295 @45 'PREVIOUS PATIENT NUMBER: ' PREPATNO 3. /  
296 @45 'PREVIOUS INVESTIGATOR NUMBER: ' PREINVNO 5. /  
297 @45 'PREVIOUS DRUG AND DOSE: '  
298 ' PRVDRG $PDG. +1 DOSAGE $CHAR4. /  
299 @45 'PREMATURE DISCONTINUATION: ' DISCONTN $CHAR3. /  
300 @45 'REASON FOR PREMATURE DISCONTINUATION: ' REASON RSN. ;  
301 IF LAST.PATNO THEN PUT /;  
302 IF LNLFT>9 THEN RETURN;  
303 PUT _PAGE_ ;  
304 PUT @13 PROTOCOL 3. +5 INVNAME NAME. +1 INVNO 5. @;  
305 RETURN;  
306 H:  
307 PUT @10 'PROTOCOL' @23 'INVESTIGATOR' /  
308 @23 'NAME & NUMBER' //;  
309 RETURN;  
310 RUN;
```

NOTE: 115 LINES WERE WRITTEN TO FILE PRINT.  
NOTE: DATA SET WORK.PRETTY4 HAS 13 OBSERVATIONS AND 19 VARIABLES. 146 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.08 SECONDS AND PRINTED PAGES 2 TO 5.

```
311 OPTIONS MISSING=' ' ;  
312 DATA ENTRY5; SET ENTRY;  
313 BY PROTOCOL INVNO TYPE INTYPE;  
314 IF TYPE=5;  
315 KEEP PROTOCOL INVNO TYPE INTYPE PATNO RNDCODE INITS VISITNO PVD AVD  
316 INVNAME  
317 ENROLDTE DAYSDIFF PVSTDATE AVSTDATE;  
318
```

NOTE: DATA SET WORK.ENTRY5 HAS 83 OBSERVATIONS AND 15 VARIABLES. 410 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.06 SECONDS.

```
318 PROC SORT;  
319 BY PROTOCOL INVNO TYPE PATNO VISITNO;  
320 /*  
321 PROC PRINT;  
322 */
```

NOTE: DATA SET WORK.ENTRY5 HAS 83 OBSERVATIONS AND 15 VARIABLES. 410 OBS/TRK.  
NOTE: THE PROCEDURE SORT USED 0.14 SECONDS.

```
323 DATA TALLY5; SET ENTRY5;  
324 BY PROTOCOL INVNO TYPE PATNO VISITNO;  
325 IF FIRST.PATNO THEN TALLY=0; TALLY + 1;  
326 IF LAST.PATNO;  
327 VISITNO=-1;  
328 OUTPUT; RETURN;
```

NOTE: DATA SET WORK.TALLY5 HAS 13 OBSERVATIONS AND 16 VARIABLES. 384 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.04 SECONDS.

```
329 DATA ENTRY5; SET TALLY5 ENTRY5;  
330 BY PROTOCOL INVNO TYPE PATNO VISITNO;  
331 RETAIN KOUNT;  
332 DROP TALLY;  
333 IF VISITNO=>0 THEN GO TO NEXT;  
334 KOUNT=TALLY; DELETE;  
335 NEXT; OUTPUT; RETURN;
```

NOTE: DATA SET WORK.ENTRY5 HAS 83 OBSERVATIONS AND 16 VARIABLES. 384 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.06 SECONDS.

```

336 DATA PRETTY5; SET ENTRY5;
337 TITLE4 'RECORD OF PATIENT VISITS';
338 TITLES ' ';

```

NOTE: DATA SET WORK.PRETTY5 HAS 83 OBSERVATIONS AND 16 VARIABLES. 384 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.04 SECONDS.

```

339 DISPLAY
374 RUN;

```

NOTE: 104 LINES WERE WRITTEN TO FILE PRINT.  
NOTE: THE DATA STATEMENT USED 0.07 SECONDS AND PRINTED PAGES 6 TO 8.

```

375 DATA KOUNT; SET ENTRY4;
376 TITLE4 'STATUS OF PATIENT ENROLLMENT';
377 TITLES ' ';
378 BY PROTOCOL INVNO TYPE PATNO;
379 IF FIRST.INVNO THEN DO;
380 TALLY=0; DKOUNT=0;
381 END;
382 IF FIRST.PATNO THEN TALLY + 1;
383 IF DISCNTN='YES' THEN DKOUNT + 1;
384 IF LAST.INVNO;
385 NACTIVE=TALLY-DKOUNT;
386 OUTPUT; RETURN;

```

NOTE: DATA SET WORK.KOUNT HAS 2 OBSERVATIONS AND 21 VARIABLES. 322 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.05 SECONDS.

```

387 DATA KOUNT; SET;
388 FILE PRINT;
389 BY PROTOCOL INVNO TYPE PATNO;
390 PUT #10 'PROTOCOL : ' PROTOCOL 3.
391 +4 'INVESTIGATOR : ' INVNAME NAME.
392 +4 'INV. NUMBER : ' INVNO 5. //
393 @20 'NUMBER OF PATIENTS ENROLLED ' TALLY 3. /
394 @20 'NUMBER OF ACTIVE PATIENTS ' NACTIVE 3. /
395 @20 'NUMBER OF DISCONTINUED PATIENTS ' DKOUNT 3. //
396 ;
397 RETURN;
398 RUN;

```

NOTE: 8 LINES WERE WRITTEN TO FILE PRINT.  
NOTE: DATA SET WORK.KOUNT HAS 2 OBSERVATIONS AND 21 VARIABLES. 322 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.06 SECONDS AND PRINTED PAGE 9.

```

399 GOPTIONS DEVICE=ZETA887 MODISPLAY GSFNAME=ZETAPLOT GSFMODE=APPEND;
400 GOPTIONS NDSYMBOL NDDASH NOTEXT82 CBY=RED FBY=COMPLEX;
401 DATA GRAPH; SET KOUNT;
402 VARIABLE=' ENROLLED ' ; PATIENT=TALLY; OUTPUT;
403 VARIABLE='DISCONTINUED'; PATIENT=DKOUNT; OUTPUT;
404 VARIABLE='ACTIVE ' ; PATIENT=NACTIVE; OUTPUT;
405

```

NOTE: DATA SET WORK.GRAPH HAS 6 OBSERVATIONS AND 23 VARIABLES. 284 OBS/TRK.  
NOTE: THE DATA STATEMENT USED 0.05 SECONDS.

```

405 PROC SORT DATA=GRAPH; BY PROTOCOL INVNAME VARIABLE;
406 RUN;

```

NOTE: DATA SET WORK.GRAPH HAS 6 OBSERVATIONS AND 23 VARIABLES. 284 OBS/TRK.  
NOTE: THE PROCEDURE SORT USED 0.14 SECONDS.

```

407
407 PROC GCHART DATA=GRAPH;
408 BY PROTOCOL;
409 AXIS1 ORDER=(0 TO 10)
410 MINOR=NONE
411 LABEL=(C=RED F=COMPLEX 'NUMBER OF PATIENTS');
412 PATTERN1 V=X1 C=RED;
413 PATTERN2 V=X1 C=BLUE;
414 PATTERN3 V=X1 C=GREEN;
415 HBAR VARIABLE / DISCRETE
416 NOHEADING
417 GROUP=INVNAME
418 PATTERNID=MIDPOINT
419 CTEXT=BLUE
420 CAXIS=BLUE
421 RAXIS=AXIS1
422 SUMVAR=PATIENT
423 ;
424 TITLE1 F=COMPLEX C=RED 'CURRENT ENROLLMENT';
425 TITLE2 F=COMPLEX C=RED H=1.5 'WYETH-AYERST RESEARCH';
426 TITLE3 F=COMPLEX C=RED H=1.5
427 'INVESTIGATORS ENTERING PROTOCOL 489SF-SUG114';
428 TITLE4 H=1.5;
429 FOOTNOTE1 C=RED F=COMPLEX H=1.2
430 'IBM 3090 MAINFRAME DATA BASE CREATED BY C. M. BOBIK AND A. C. SINGER';
431 LABEL INVNAME='INVESTIGATOR'
432 VARIABLE='
433 ;
434 FORMAT INVNAME NAME.;
435 RUN;
NOTE: THE PROCEDURE GCHART USED 0.44 SECONDS.

```

FAST-TRACKING FOR THE CLINICAL SCIENTIST USING SAS(R) SOFTWARE  
SUGI14, SAN FRANCISCO, 1989

PROFILE OF INVESTIGATING PHYSICIAN(S)

PROTOCOL	INVESTIGATOR NUMBER	
489	48922	JACK O. PILLPUSHER, M.D. HEAD, CLINICAL RESEARCH UNIT DEPARTMENT OF MEDICINE LOWER SLOBOVIA MEDICAL CENTER 1234 DOORPATCH AVENUE COOTER HOLLOW, NS 00000 (998) 634-1907
		NURSE RATCHET (STUDY COORDINATOR)
		YANCEY HARRIS, M.D. (SUBINVESTIGATOR)

DEMOGRAPHIC HISTORY OF STUDY PATIENTS

PROTOCOL	INVESTIGATOR NAME & NUMBER				
489	PILLPUSHER 48922	PATIENT NUMBER: 001	PATIENT'S INITIALS: XXY	DATE OF BIRTH: 04SEP37	SEX: FEMALE
		RANDOMIZATION CODE: 1243 PREVIOUS PROTOCOL NUMBER: 399 PREVIOUS PATIENT NUMBER: 032 PREVIOUS INVESTIGATOR NUMBER: 39903 PREVIOUS DRUG AND DOSE: THERAPY A 500 PREMATURE DISCONTINUATION: NO REASON FOR PREMATURE DISCONTINUATION:			
		PATIENT NUMBER: 002	PATIENT'S INITIALS: MNO	DATE OF BIRTH: 30AUG36	SEX: MALE
		RANDOMIZATION CODE: 1231 PREVIOUS PROTOCOL NUMBER: 399 PREVIOUS PATIENT NUMBER: 044 PREVIOUS INVESTIGATOR NUMBER: 39903 PREVIOUS DRUG AND DOSE: THERAPY A 250 PREMATURE DISCONTINUATION: NO REASON FOR PREMATURE DISCONTINUATION:			

RECORD OF PATIENT VISITS

PROTOCOL	INVESTIGATOR NAME & NUMBER	VISIT NUMBER				
489	PILLPUSHER 48922	0	PATIENT NUMBER: 001	PATIENT'S INITIALS: XXY	DATE OF ENROLLMENT: 02JAN89	
			PROPOSED VISIT DATE	ACTUAL VISIT DATE	DIFFERENCE (IN DAYS)	
		1	02FEB89	04FEB89	2	
		2	03APR89	01APR89	-2	
		0	PATIENT NUMBER: 002	PATIENT'S INITIALS: MNO	DATE OF ENROLLMENT: 16JUN88	
			PROPOSED VISIT DATE	ACTUAL VISIT DATE	DIFFERENCE (IN DAYS)	
		1	16JUL88	15JUL88	-1	
		2	18AUG88	13AUG88	-5	
		3	16SEP88	17SEP88	1	
		4	16OCT88	19OCT88	3	
		5	16NOV88	11NOV88	-5	
		6	18DEC88	18DEC88	0	
		7	16JAN89	16JAN89	0	
		8	16FEB89	06FEB89	-10	

STATUS OF PATIENT ENROLLMENT

PROTOCOL : 489    INVESTIGATOR : PILLPUSHER    INV. NUMBER : 48922

NUMBER OF PATIENTS ENROLLED    7  
NUMBER OF ACTIVE PATIENTS    7  
NUMBER OF DISCONTINUED PATIENTS    0