Tables for

TECHNICAL REPORT FOR "SURVEILLANCE METHODS FOR SOLVENT-RELATED HEPATOTOXICITY" (SERCA 1 K01 OH00165-01)

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TABLE 1 DEMOGRAPHICS BY EXPOSURE GROUP, ALL SUBJECTS

	Carpenter	SD	Millwright	SD	Painter	SD	Significance, Oneway ANOVA
N	44		24		34		
Age	47	8	50	9	43	8	.006 +
Gender, male	42	95	24	100	32	94%	Chi2 = 1.4 P= 0.50
Female	2	5			2	6%	
Height	70	2	70	2	70	3	.53
Weight	198	27	206	30	193	31	.26
BMI (kg/m^2)	28	4	29	4	28	4	.47
Ethnicity (check values)							chi2=10.1 P= 0.43
1	1	2					
2					1	3%	
3	39	93	24	100	31	91%	
4					2	6%	
5	1	2					
6	1	2					
Education	12	1	12	1	11	1	chi2 P= 0.17 (n c=34, m=17, p=)33
Duration of employment (years in trade)	22	7	22	9	20	7	0.42
Alcohol consumption (g/week)							
Current (last 6 months)	58	93	88	110	68	92	chi2 P= 0.94
Maximum (any 6 months)	148	134	224	191	170	165	chi2 P= 0.18

+ test output below

Hetrogeneity of Gender, ethnicity, education, current alch, max alch across of job was assessed with chi2 because of non-normal distributions.

All non-normal distributions were also assessed for differences across levels of job with the Median test (Fishers exact). None were significantly different.

TABLE 2 BIOCHEMICAL DATA BY JOB CATEGORY

	Carpenter	[Millwright + Painter]	Millwright	Painter	Significance chi2 [Millwright + Painter]	Significance chi2 Carp, Mill, Paint
N	44	58	24	34		
HepC+	**1 (2%)**		**0**	**2 (6%)**		
Total bilirubin	0.6 (0.3)	0.6 (0.3)	0.6 (0.3)	0.6 (0.3)	0.53 (RS .85)	0.69
Direct bilirubin	0.2 (0.1)	0.2 (0.1)	0.2 (0.1)	0.1 (0.1)	0.72 (RS .79)	0.70
ALT	28 (15)	29 (15)	27 (12)	31 (16)	0.82 (RS .50)	0.85
AST	29 (7)	19 (10)	27 (9)	31 (10)	0.41 (RS .47)	0.27
GGT	27 (16)	35 (25)	27 (13)	41 (30)	0.24 (.11 trend test) (**.05** Rank Sum test*)	0.095 *
Alk Phos	70 (22)	73 (17)	72 (17)	74 (18)	0.39 (RS .24)	0.80
H6Ai C (shbaic, hemaglobin, diabetes)	5 (0.5)	5 (0.3)	5 (0.3)	5 (0.5)	0.38 (RS .62)	0.58 n=98 c=41, m=23, p=34

GGT BY JOB CATEGORY

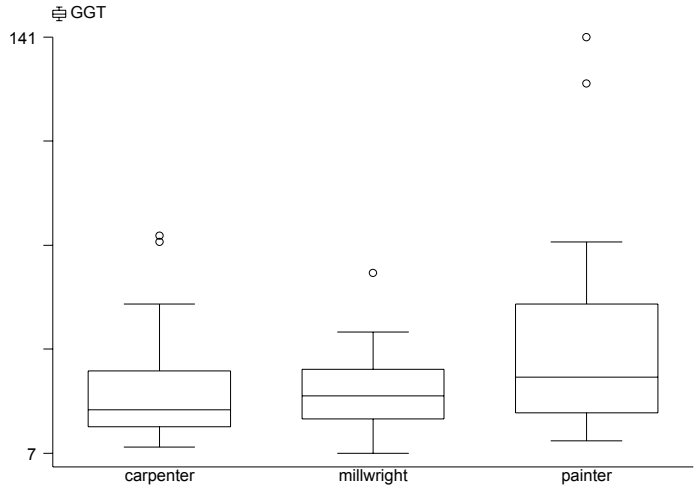

TABLE 3 SERUM BILE ACIDS, OUTCOME CHANGES BY CATEGORICAL EXPOSURE

Serum Bile Acid data ID #52 is missing all of this data from file smhsys1.dta. Is this correct?

Mean (SD)	Carpenter	[Millwright + Painter]	Millwright	Painter	Mann-Whitney rank sum test [Millwright + Painter]	Median Test fishers exact carp, mill, painter
N	44	57	24	33	P-value	P-value
Cholic acid	21 (29)	18 (18)	16 (15)	20 (20)	.92	.79
Chenodeoxycholic, cheno	23 (16)	28 (35)	18 (10)	34 (44)	.87	.42
Tauroiholais, tc	68 (116)	44 (27)	45 (36)	44 (20)	.99	.79
Glycdoholaz, gc	43 (29)	41 (20)	40 (25)	42 (17)	.63	.28
Glycodeoxycholate, gcdc	61 (48)	68 (41)	68 (50)	68 (34)	.14	.46
Glycodeoxycholate, gdc	33 (27)	31 (33)	42 (43)	24 (19)	.47	.34
Taurolithocholate, tlc	1.9 (3.0)	1.1 (2.2)	0.6 (2.0)	1.4 (2.3)	.12	.11
Glycolithoiholate, glc	12 (11)	12 (11)	12 (11)	13 (11)	.97	.93

TABLE 4 CYTOKINE AND PROCOLLAGEN LEVELS

	Carpenter	[Millwright + Painter]	Millwright	Painter	Mann-Whitney U [Millwright + Painter]	Median Test fishers exact Carp,mill,paint
					P-value	P-value
Tgfb1	8.8 (5.5)	7.7 (5.4)	6.6 (3.6)	8.5 (6.5)	.33	.65
ProcollageIII (PIIIP)	.74 (.17)	.76 (.14)	.82 (.14)	.72 (.13)	.33	**.07**
TNF-Alpha	348 (1062)	296 (769)	498 (1088)	153 (380)	.68	.36
TNF-RI	615 (177)	607 (178)	641 (211)	583 (149)	.93	.79

PROCOLLAGEN III LEVELS BY JOB CATEGORY

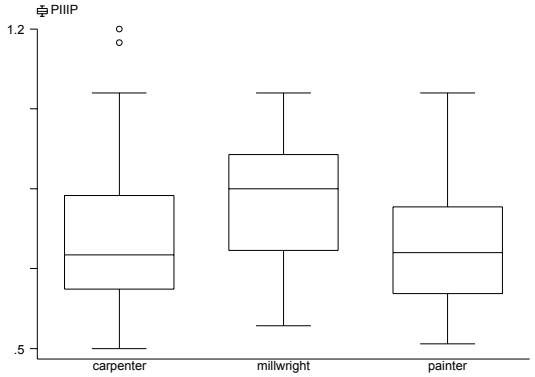

TABLE 4B QUALATATIVE ULTRASOUND READINGS BY EXPOSURE INDEX

	n with Zero expousre	N	Normal	Mild	Moderate-Severe	Any	Mantel-Haenszes test of trend, p-value
General Solvent	15						
Above median (12.9)		51	19 (37)	20 (39)	12 (24)	32 (63)	.07*
Below median		51	24 (47)	23 (45)	4 (8)	27 (53)	
Metal Exposure (0.2)	48						
Above median		54	21 (39)	23 (43)	10 (19)	33 (61)	.36
Below median		48	22 (46)	20 (42)	6 (13)	26 (54)	
Solvent alone (4.1)	29						
Above median		51	20 (39)	22 (43)	9 (18)	31 (61)	.49
Below median		51	23 (45)	21 (41)	7 (14)	28 (55)	
Chlorinated Solvent (0.0)	77						
Above median		25	11 (44)	10 (40)	4 (16)	14 (56)	.90
Below median		77	32 (42)	33 (43)	12 (16)	45 (58)	

*p=0.03 for comparison of moderate-severe vs. normal and mild

TABLE 5 QUANTITATIVE ULTRASOUND (PHANTOM) BY JOB CATEGORY AND VARIOUS SEMI-QUANTITATIVE SOLVENT EXPOSURE INDICES

	Median		Chi^2	90^{th} percentile		
	Low	High	P-value	Low	High	P-value
Carpenter (controls, n(%))	23 (52)	21 (48)		41 (93)	3 (7)	-
Millwright + Painter	29 (50)	29 (50)	.82	53 (91)	5 (9)	.74
Millwright	10 (42)	14 (58)	.40	21 (88)	3 (13)	.43
Painter	19 (56)	15 (44)	.75	32 (94)	2 (6)	.87
Metal Exposure						
Above median	23 (48)	25 (52)		43 (90)	5 (10)	
Below median	29 (54)	25 (46)	.56	51 (94)	3 (6)	.36
Solvent alone *						
Above median	26 (51)	25 (49)		47(92)	4 (8)	
Below median	26 (51)	25 (49)	1.0	47 (92)	4 (8)	1.0
Chlorinated Solvent						
Above median	38 (49)	39 (57)		70 (91)	7 (9)	
Below median	14 (56)	11 (44)	.56	24 (96)	1 (4)	.41
Job 15 years						
Above median	10 (48)	11 (52)		20 (95)	1 (5)	
Below median	42 (52)	39 (48)	.73	74 (91)	7 (9)	.56

TABLE 6 MULTIPLE LINEAR REGRESSION MODELS, ADJUSTED DIFFERENCES IN HEPATIC BIOCHEMICAL FUNCTION BY GENERAL SOLVENT EXPOSURE INDEX

General Solvent	Age	Gender	BMI	Alcohol	HepC+		R^2	Index Coefficient (P)
AST	.04	2.88	.14	.01	19.08 ***		.101	.02 (.65)
ALT	-.10	9.32	.79*	.02	33***		.187	.10 (.13)
GGT	.12	12.1	.87	.01	4.17		.043	.22 **(.04)**
AP	-0.04	-19	.02	-.00	0.48		-.023	.03 (.78)
Direct Bilirubin	-.00	.04	-.00	-.00	-.03		-.018	-.00 (.41)
D/Total Bilirubin	.00	.11	-.02 **	-.00	-.19		.028	-.00 (.60)
H6Ai C (shbaic, hemaglobin, diabetes)	.01 **	.16	.02*	-.00	-.16		.11	-.00 (.79)

AST = B1 Age + B2 Gender + B3 BMI + B4 Alcohol + B5 Hep C Serology + B6 Packyears + B7 Solvent Exposure*

*Solvent exposure assessed by semi-quantitative index

*<0.05;**<0.01;***<0.001