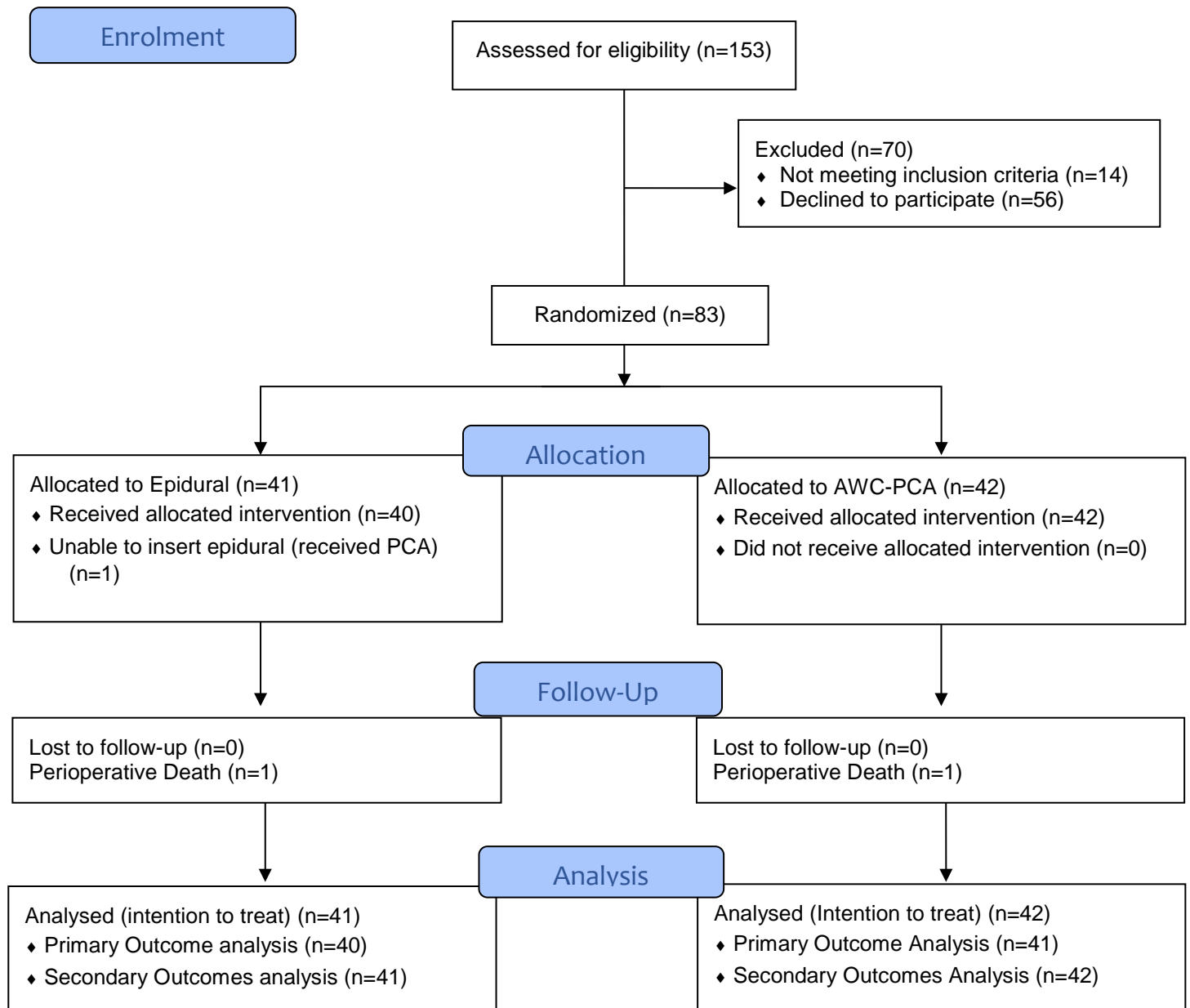


Participant Flow



Baseline Characteristics

	EP (range/%) (n=41)	AWC (Range/%) (n=42)	P Value
Age, median (year)	67.3 (25-85)	65 (24-79)	0.133
Sex (Female)	12 (29%)	15 (36%)	0.348
ASA II	16 (39%)	17 (40%)	0.830
BMI (median, kg/m ²)	26 (18-41)	28 (23-42)	0.115
Baseline Peakflow Median (L/min)	395 (170-700)	415 (210-800)	0.379
Diagnosis			
CRLM	27 (66%)	23 (55%)	0.534
HCC	5 (12%)	7 (17%)	
CCA	5 (12%)	3 (7%)	
Benign	3 (7%)	6 (14%)	
Other	1 (3%)	3 (7%)	
PVE	2 (5%)	2 (5%)	0.683
Major Resection	23 (56%)	24 (57%)	0.574
Anatomical resection	21 (51%)	23 (55%)	0.298
Number of Segments (median)	4 (0-6)	3 (0-5)	0.291
Wound Shape			
Reverse 'L'	36 (88%)	36 (85%)	0.559
Kocher	1 (2%)	1 (2%)	
Midline	4 (10%)	5 (12%)	
Wound Length (median, cm)	28 (17-45)	27.5 (15-36)	0.458
Prior Abdo. Surgery	27 (66%)	23 (55%)	0.302
Redo Liver Resection	6 (14%)	3 (7%)	0.272
Intraop. Transfusion	2 (5%)	0 (0%)	0.147

ASA - American Society of Anesthesiology, BMI - Body Mass Index, CRLM – colorectal liver metastases, HCC – hepatocellular carcinoma, CCA – cholangiocarcinoma, PVE – portal vein embolization

Outcome Measures

	EP (n=41)	AWC (n=42)	P Value
Anesthetic Time (min) (median, range) (mean, SD)	62 (20-126) 64 (23)	49 (20-115) 50 (19)	0.003
Surgical Time (min) (median, range) (mean, SD)	170 (80-390) 187 (75)	203 (90-402) 212 (81)	0.095
Intraoperative Opioid (IV Morphine Equivalent, mg)	15 (3-30)	13.5 (0-45)	0.548
Intraoperative Vasopressors None Noradrenaline Infusion Metaraminol Bolus	13 (32%) 23 (56%) 5 (12%)	19 (45%) 10 (24%) 13 (31%)	0.001
Intraoperative fluid (ml) (median, range) (mean, SD)	2000 (1000-6000) 2267 (1178)	2000 (1000-6000) 2262 (989)	0.579
HDU Admission	38 (93%)	39 (93%)	0.644
Requirement for Vasopressors			
Day 0	22 (54%)	6 (14%)	<0.001
Day 1	9 (22%)	2 (5%)	0.021
Day 2	3 (7%)	1 (2%)	0.305
Intravenous Fluid Requirement (ml)			
Day 0 (median, range) (Mean, SD)	1650 (600-3826) 1675 (742)	1663 (664-3596) 1890 (740)	0.282
No. requiring IVI	41/41 (100%)	42/42 (100%)	
Day 1 (median, range) (Mean, SD)	1550 (100-4650) 1787 (1057)	1437 (250-4667) 1503 (915)	0.294
No. requiring IVI	41/41 (100%)	42/42 (100%)	
Day 2 (median, range) (Mean, SD)	490 (0-4639) 890 (1094)	80 (0-3246) 623 (883)	0.177
No. requiring IVI	27/41 (66%)	22/42 (52%)	
Day 3 (median, range) (Mean, SD)	0 (0-3000) 552 (866)	0 (0-2000) 65 (359)	0.001
No. requiring IVI	13/41 (32%)	1/42 (2%)	
Peak Flow from baseline (L/min)			
Day 0	80 (-10-450)	160 (10-260)	0.015
Day 1 am	150 (-30-580)	170 (0-500)	0.012
Day 1 pm	100 (-60-500)	180 (0-400)	0.005
Day 2 am	120 (-10-350)	215 (0-500)	0.001
Day 2 pm	110 (-60-590)	180 (0-450)	0.039
Day 3 am	100 (-20-610)	180 (0-450)	0.033
Day 3 pm	110 (-60-590)	145 (0-300)	0.291

Days to Bowels Open (days) (median, range) (mean,SD)	3 (1-7) 3 (1.4)	3 (0-8) 3.5 (1.6)	0.145
Time to sit out (hr) (median, range) (mean, SD)	17 (15-26) 17.3 (1.4)	16.5 (4-20) 16.7 (3.2)	0.563
Length of Stay HDU (days) (median, range) (mean, SD)	1 (1-6) 1.8 (1.4)	1 (0-6) 1.3 (1)	0.097
MFFD (days) (median, range) (mean, SD)	5 (3-27) 6.8 (4.8)	5 (3-66) 8.2 (11)	0.611
Length of Stay (days) (median, range) (mean, SD)	6 (3-38) 7.2 (6)	6 (3-66) 8.7 (11.7)	0.886
Complications	12 (29%)	13 (31%)	0.867
Clavien-Dindo I II IIIa IIIb IVa IVb V	2 (5%) 4 (10%) 2 (5%) 2 (5%) 1 (2%) 0 (0%) 1 (2%)	2 (5%) 4 (10%) 0 (0%) 1 (2%) 3 (7%) 2 (5%) 1 (2%)	0.506
Re-Operation	3 (7%)	3 (7%)	0.500
90-Day Readmission	2 (5%)	7 (16%)	0.077
90-Day Mortality	1 (2%)	1 (2%)	0.747
Treatment Failure	8 (20%)	3 (7%)	0.090

IV – Intravenous, HDU – High Dependency Unit, MFFD – medically fit for discharge

Outcome Measures: Total Analgesic Requirements (IV Morphine Equivalent, mg)

	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5
AWC-PCA (n=42)						
Median (Range)	18.5 (0-76)	14 (0-81)	2 (0-129)	1 (0-10)	0.25 (0-5)	0 (0-5)
Mean (SD)	20 (16)	21 (22)	11 (25)	1 (1.9)	1.1 (1.4)	1 (1.5)
EP (n=41)						
Median (Range)	0 (0-70)	0 (0-89)	0 (0-128)	2 (0-80)	1 (0-96)	0 (0-8)
Mean (SD)	3 (13)	10 (22)	8.7 (24)	7 (16)	4 (15)	1 (1.5)
EP Failure (n=8)						
Median (Range)	2 (0-70)	43 (12-89)	16 (1-128)	0.5 (0-80)	1 (0-2)	0.25 (0-2)
Mean (SD)	19 (28)	46 (30)	33 (44)	5 (12)	1 (1.1)	1 (1)
P Value	<0.001	<0.001	<0.001	0.004	0.455	0.712

Kruskal-Wallis on median, EP Failure was managed with PCA alone

Adverse Events

There were no adverse events related to either method of analgesia during this study.