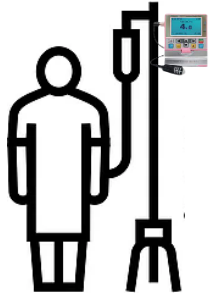


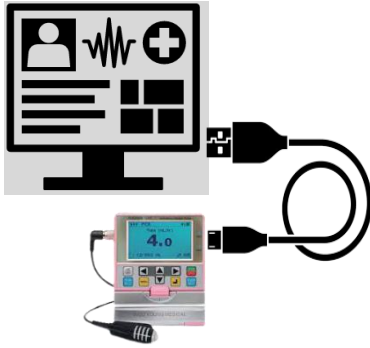
**Workflow of data repository of
patient controlled analgesia device and clinical information**



Patient with PCA



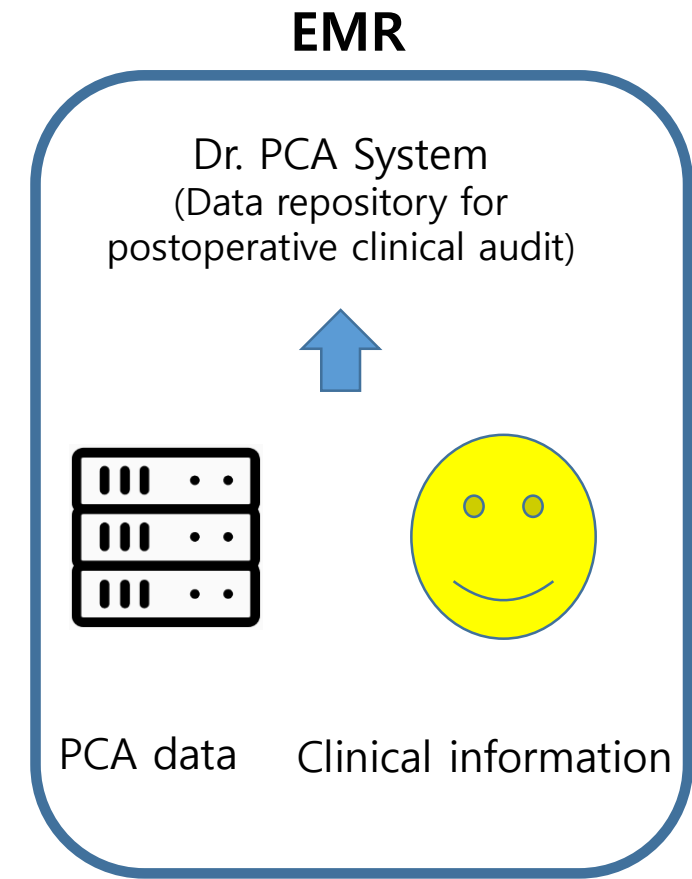
Returned devices



Data transfer

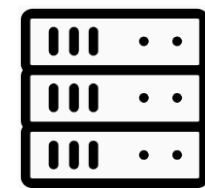


Data storage



EMR

Dr. PCA System
(Data repository for
postoperative clinical audit)



PCA data



Clinical information

**Sample capture images showing the data repository for
postoperative clinical audit**

■	병실	등록번호	오더일	등록일	이름	나이	성별	신장	체중	수술과	수술명	마취종류	마취시간	PCA약품
						49	M	167.5	60	GS	Renal transplantation (right)	General	5시간 52분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						62	M	172.8	55.7	NS	Removal of spinal extradural tumor	General	3시간 54분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						73	F	157.3	64.95	NS	PLIF (posterior lumbar interbody fusion) (bilateral)	General	4시간 42분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						73	F	143.9	50	GS	Radical subtotal gastrectomy	General	4시간 26분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						75	F	149.4	63.65	GS	Lumpectomy (right/ with sentinel lymph node biopsy)	General	2시간 7분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						47	F	158.2	52.56	GS	Lumpectomy (right/ with sentinel lymph node biopsy)	General	1시간 28분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						66	M	170	65	GS	Radical subtotal gastrectomy	General	3시간 47분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						72	M	166.6	56.0	GS	Extended right hemicolectomy	General	2시간 54분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						17	F	155.9	47.3	OS	Posterior decompression, lumbar spine	General	2시간 55분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						83	F	156.4	56.3	OS	Posterior decompression, lumbar spine	General	2시간 9분	Sodium chloride 0.9% 100ml/PA, BC Fentanyl Citrate 1500mcg(Fentanyl), Nasea 0.3mg(Ramosetron)
						53	M	167.3	62.50	UR	Nephrectomy, living donor (left/ open)	General	4시간 37분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						72	M	156.65	59.26	UR	Prostatectomy, radical (robotic)	General	4시간 1분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						58	F	153.9	59.7	CS	VATS (video-assisted thoracic surgery) LULobectomy	General	2시간 37분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						26	F	164	81.2	OB	Emergency cesarean section with lower uterine segment transverse incision	Spinal	1시간 29분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
✓						24	F	165.4	55.5	GY	Pelviscopic left salpingo-oophorectomy (benign)	General	2시간 10분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						58	F	160.7	70.4	GY	Radical hysterectomy (laparotomy)	General	7시간 0분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						33	M	162.9	69.1	OS	Arthroscopic microfracture surgery, knee	Spinal	1시간 29분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						70	M	171.6	74.1	OS	TKRA (total knee replacement arthroplasty)	Spinal	3시간 34분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						68	M	169.1	57.9	OS	Arthroscopic debridement, knee	epidural	2시간 30분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						62	M	173.1	70.65	CS	Axillo-bifemoral bypass (Ax-fem, fem-fem)	General	3시간 49분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						75	M	174.1	75.7	CS	Lobectomy of lung	General	3시간 39분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						79	F	141.9	44	OS	Revision of TKRA (total knee replacement arthroplasty)	General	2시간 25분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						77	F	149.6	52.5	NS	Wound revision	General	3시간 37분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						43	F	166	61.2	GS	Unilateral simple mastectomy (left/ with sentinel lymph node biopsy)	General	2시간 19분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						77	F	152.4	50	GS	Lumpectomy (right/ with sentinel lymph node biopsy)	General	1시간 39분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						54	F	162.6	59.3	GS	Laparoscopic extended right hemicolorectomy	General	3시간 10분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						63	M	174.6	73.7	GS	Robotic low anterior resection of rectum	General	6시간 44분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						36	M	177	71.5	GS	Wedge resection of liver	General	2시간 2분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						62	M	163.8	65.3	GS	TLDG (Totally laparoscopic distal gastrectomy)	General	3시간 0분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						50	F	161.9	61.3	OS	Arthroscopic debridement, shoulder	BPB	2시간 24분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						63	M	167	71	GS	TLDG (Totally laparoscopic distal gastrectomy)	General	3시간 59분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						58	F	158.0	64.4	GS	Unilateral simple mastectomy (right/ with sentinel lymph node biopsy)	General	1시간 13분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						69	F	153.8	64.7	GS	Laparoscopic cholecystectomy	General	1시간 10분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)
						73	F	144	49.7	GS	Laparoscopic gastric wedge resection	General	1시간 7분	Sodium chloride 0.9% 100ml/PA, Fentanyl citrate 500mcg, Nasea 0.3mg(Ramosetron)

SET_AMOUNT (U)	SET_VOL (mL)	SET_DOSE_RATE	SET_DOSE_RATE_UNIT	SET_RATE (mL/h)	SET_BOLUS_PAT_U	SET_LOCKOUT (min)	SET_LOAD_DOSE (U)	3_TOTAL_VOL_CUM (mL)	6_TOTAL_VOL_CUM (mL)	9_TOTAL_VOL_CUM (mL)	12_TOTAL_VOL_CUM (mL)	24_TOTAL_VOL_CUM (mL)	48_TOTA
2000	100	20	mcg/hr	1	20	10	50	7.60	9.20	9.20	9.20	9.20	9.20
1500	100	15	mcg/hr	1	15	10	40.50	11.90	17.60	25.90	30.60	43.60	76.80
1500	100	15	mcg/hr	1	15	10	40.50	9.60	11.90	14.50	17.50	29.50	58.50
1500	100	15	mcg/hr	1	15	10	40.50	10.90	17	24.70	28.60	44.50	59.10
1000	100	10	mcg/hr	1	15	10	70	8.50	8.50	8.50	8.50	8.50	8.50
1000	100	10	mcg/hr	1	10	10	30	6.90	9.90	12.90	15.90	27.90	41.20
1500	100	15	mcg/hr	1	19.50	10	49.50	6.20	10.50	13.50	16.50	32.40	56.40
1500	100	15	mcg/hr	1	15	10	40.50	6.60	9.60	12.60	15.60	28.60	53.60
1500	100	15	mcg/hr	1	15	10	30	2.90	2.90	2.90	2.90	2.90	2.90
1500	100	10.50	mcg/hr	0.70	10.50	10	12	7.30	9.40	12.20	17.10	28.90	50.60
0	0	0		0	0	0	0	0	0	0	0	0	0
1500	100	15	mcg/hr	1	15	10	49.50	8.20	9	9	9	9	9
1000	100	0	mcg/hr	0	15	1	30	21	25.50	33	43.50	58.50	70.50
0	0	0		0	0	0	0	0	0	0	0	0	0
0	0	0	mcg/hr	0	0	0	0	0	0	0	0	0	0
0	0	0	mcg/hr	0	0	0	0	0	0	0	0	0	0
1500	100	0	mcg/hr	0	15	10	0	0	0	0	0	0	0
1500	100	0	mcg/hr	0	15	10	0	0	6	9	9	12	13
1500	100	0	mcg/hr	0	15	10	0	0	0	1	1	2	6
1500	100	15	mcg/hr	1	15	10	40.50	15.60	19.60	22.60	25.60	50.60	83.60
0	0	0		0	0	0	0	0	0	0	0	0	0
1500	100	10.50	mcg/hr	0.70	10.50	10	30	4.70	6.80	8.90	11	20.10	40.40
1500	100	15	mcg/hr	1	15	10	40.50	8.10	11.10	15.10	19.10	31.10	55.10
1000	100	10	mcg/hr	1	10	10	30	13.50	19.40	23.40	26.40	35.10	59.10
1000	100	10	mcg/hr	1	10	10	30	6.90	11	13.90	16.90	28.90	52.80
1500	100	15	mcg/hr	1	15	10	40.50	8.60	13.80	17.60	20.60	32.60	51.50
1500	100	15	mcg/hr	1	15	10	40.50	9.30	13.30	16.30	20.70	40.30	74.30
1500	100	15	mcg/hr	1	15	10	40.50	14.60	21.60	24.60	27.60	44.60	75.60
1500	100	15	mcg/hr	1	15	10	40.50	13.30	16.30	20.30	24.30	28.80	46.80
0	0	0		0	0	0	0	0	0	0	0	0	0
1500	100	15	mcg/hr	1	15	10	40.50	11.60	15.60	18.60	23.70	40.60	64.60
1000	100	10	mcg/hr	1	10	10	6	9.70	12.60	15.60	18.60	30.60	55
1000	100	10	mcg/hr	1	10	10	20	5	8	11	14	26	41.20
1500	100	15	mcg/hr	1	15	10	30	4.40	8.40	12.40	15.40	19	46

24_BOL_ATTEMPT_CUM (mL)	24_BOL_GIVEN_CUM (mL)	TOTAL_BOL_ATTEMPT_CUM (mL)	TOTAL_BOL_GIVEN_CUM (mL)	Time Elapsed (hh:mm)	NEW START time	op end time	계산된 Time Elapsed	USB Cable Attached	서버저장시간
2	2	2	2	4:47		2022-02-03 15:00	4:19	2022-02-08 16:56:42	2022-02-08 16:56:54
18	17	37	36	70:40		2022-02-03 17:43	70:11	2022-02-10 12:35:28	2022-02-10 12:36:07
13	6	31	19	78:30		2022-02-03 13:03	77:51	2022-02-07 16:58:49	2022-02-07 16:59:42
25	20	32	27	64:53		2022-02-03 12:46	64:33	2022-02-07 17:04:35	2022-02-07 17:02:30
2	1	2	1	33:59		2022-02-03 13:43	33:56	2022-02-07 16:56:27	2022-02-07 16:59:22
1	1	1	1	37:17		2022-02-03 15:32	37:16	2022-02-07 17:04:18	2022-02-07 17:01:50
4	4	14	10	83:59		2022-02-03 16:47	83:58	2022-02-07 17:00:19	2022-02-07 16:58:39
2	2	9	8	89:18		2022-02-03 16:11	89:1	2022-02-08 16:58:18	2022-02-08 16:58:11
0	0	0	0	0:59		2022-02-03 11:15	0:59	2022-02-07 10:38:03	2022-02-07 10:38:19
34	14	65	29	110:37		2022-02-03 13:40	110:34	2022-02-08 16:57:25	2022-02-08 16:57:24
0	0	0	0			2022-02-03 13:08			
2	2	2	2	3:48		2022-02-03 12:38	3:22	2022-02-07 10:43:39	2022-02-07 10:37:51
37	37	54	53	58:09		2022-02-03 18:44	58:2		
0	0	0	0			2022-02-03 14:59			
0	0	0	0			2022-02-03 10:40		2022-02-07 14:24:47	2022-02-07 14:28:46
0	0	0	0			2022-02-03 15:25		2022-02-07 14:29:28	2022-02-07 14:28:34
0	0	0	0	40:35		2022-02-03 12:35	40:35	2022-02-07 11:53:24	2022-02-07 11:53:09
13	12	24	21	89:37		2022-02-03 12:06	89:31	2022-02-07 11:54:50	2022-02-07 11:53:27
2	2	8	7	62:50		2022-02-03 14:52	62:50	2022-02-07 11:56:14	2022-02-07 11:53:03
36	21	46	30	49:27		2022-02-03 13:34	48:24	2022-02-07 17:01:58	2022-02-07 17:01:33
0	0	0	0			2022-02-03 17:34			
2	2	21	16	124:07		2022-02-03 18:30	124:1	2022-02-10 12:36:01	2022-02-10 12:36:18
3	3	3	3	67:58		2022-02-04 12:03	66:14	2022-02-07 16:59:52	2022-02-07 17:02:56
17	12	18	13	79:06		2022-02-04 17:07	79:06	2022-02-08 16:57:32	2022-02-08 16:57:07
3	2	3	2	88:17		2022-02-04 13:04	88:1	2022-02-08 16:57:55	2022-02-08 16:57:40
7	6	7	6	42:51		2022-02-04 11:30	42:33	2022-02-07 17:03:43	2022-02-07 17:04:06
14	13	34	30	66:39		2022-02-04 17:55	66:15	2022-02-08 16:58:40	2022-02-08 16:58:57
19	18	31	30	66:38		2022-02-04 10:25	66:31	2022-02-07 17:04:24	2022-02-07 17:02:51
13	10	13	10	71:41		2022-02-04 14:55	71:33	2022-02-08 17:01:52	2022-02-08 16:58:33
0	0	0	0			2022-02-04 16:03			
16	14	18	16	81:30		2022-02-04 12:24	81:22	2022-02-08 16:58:42	2022-02-08 16:58:46
4	4	5	5	48:35		2022-02-04 14:37	48:24	2022-02-07 17:03:05	2022-02-07 17:03:32
0	0	0	0	39:10		2022-02-04 11:43	38:59	2022-02-07 16:59:49	2022-02-07 17:00:46
6	3	21	11	68:30		2022-02-04 16:04	68:30	2022-02-08 16:59:04	2022-02-08 16:58:22