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LAMPIRAN

1. *Intraclass Coeeficient Correlation* (ICC)

Descriptives

			Statistic	Std. Error
LA_Obs1	Mean		52.7417	5.52169
	95% Confidence Interval for Mean	Lower Bound	40.5885	
		Upper Bound	64.8948	
	5% Trimmed Mean		53.0907	
	Median		53.0500	
	Variance		365.868	
	Std. Deviation		19.12768	
	Minimum		18.20	
	Maximum		81.00	
	Range		62.80	
	Interquartile Range		30.85	
	Skewness		-.474	.637
	Kurtosis		-.528	1.232
LA_Obs2	Mean		51.9667	5.44571
	95% Confidence Interval for Mean	Lower Bound	39.9807	
		Upper Bound	63.9526	
	5% Trimmed Mean		52.3519	
	Median		52.1000	
	Variance		355.870	
	Std. Deviation		18.86451	
	Minimum		17.00	
	Maximum		80.00	
	Range		63.00	
	Interquartile Range		30.13	
	Skewness		-.469	.637
	Kurtosis		-.487	1.232
SA_Obs1	Mean		49.1667	6.09748
	95% Confidence Interval for Mean	Lower Bound	35.7462	
		Upper Bound	62.5871	
	5% Trimmed Mean		49.3519	
	Median		49.0000	
	Variance		446.152	
	Std. Deviation		21.12230	
	Minimum		13.00	
	Maximum		82.00	
	Range		69.00	
	Interquartile Range		37.25	
	Skewness		-.327	.637
	Kurtosis		-.686	1.232
SA_Obs2	Mean		48.3333	6.12414
	95% Confidence Interval for Mean	Lower Bound	34.8542	
		Upper Bound	61.8125	
	5% Trimmed Mean		48.5370	
	Median		48.5000	
	Variance		450.061	
	Std. Deviation		21.21463	
	Minimum		13.00	
	Maximum		80.00	
	Range		67.00	
	Interquartile Range		38.75	
	Skewness		-.408	.637
	Kurtosis		-.819	1.232

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Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.998[a]	.993	.999	961.171	11	11	.000
Average Measures	.999[c]	.996	1.000	961.171	11	11	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

2. Karakteristik data sampel

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	25	62.5	62.5	62.5
	Perempuan	15	37.5	37.5	100.0
	Total	40	100.0	100.0	

Usia_Kat

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30 tahun	4	10.0	10.0	10.0
	31-40 tahun	6	15.0	15.0	25.0
	41-50 tahun	12	30.0	30.0	55.0
	51-60 tahun	7	17.5	17.5	72.5
	61-70 tahun	10	25.0	25.0	97.5
	71-80 tahun	1	2.5	2.5	100.0
	Total	40	100.0	100.0	

IMT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Underweight	2	5.0	5.0	5.0
	Normal	13	32.5	32.5	37.5
	Overweight	9	22.5	22.5	60.0
	Obesitas I	12	30.0	30.0	90.0
	Obesitas II	4	10.0	10.0	100.0
	Total	40	100.0	100.0	

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3. Analisis statistik

Descriptives

			Statistic	Std. Error
LA	Mean		56.5625	2.55523
	95% Confidence Interval for Mean	Lower Bound	51.3941	
		Upper Bound	61.7309	
	5% Trimmed Mean		57.5389	
	Median		63.4000	
	Variance		261.168	
	Std. Deviation		16.16069	
	Minimum		13.80	
	Maximum		83.00	
	Range		69.20	
	Interquartile Range		19.25	
	Skewness		-.991	.374
	Kurtosis		.438	.733
SA	Mean		51.6750	2.84456
	95% Confidence Interval for Mean	Lower Bound	45.9213	
		Upper Bound	57.4287	
	5% Trimmed Mean		52.5000	
	Median		57.0000	
	Variance		323.661	
	Std. Deviation		17.99058	
	Minimum		9.00	
	Maximum		82.00	
	Range		73.00	
	Interquartile Range		20.50	
	Skewness		-.899	.374
	Kurtosis		.161	.733
E	Mean		61.3250	2.49728
	95% Confidence Interval for Mean	Lower Bound	56.2738	
		Upper Bound	66.3762	
	5% Trimmed Mean		62.2500	
	Median		65.5000	
	Variance		249.456	
	Std. Deviation		15.79417	
	Minimum		21.00	
	Maximum		84.00	
	Range		63.00	
	Interquartile Range		23.00	
	Skewness		-.949	.374
	Kurtosis		.402	.733
LAvsSA	Mean		4.8875	.73707
	95% Confidence Interval for Mean	Lower Bound	3.3966	
		Upper Bound	6.3784	
	5% Trimmed Mean		4.3611	
	Median		4.0500	
	Variance		21.731	
	Std. Deviation		4.66164	
	Minimum		-.50	
	Maximum		20.00	
	Range		20.50	
	Interquartile Range		4.85	
	Skewness		1.716	.374
	Kurtosis		3.178	.733
LAvsE	Mean		-4.7625	.74359
	95% Confidence Interval for Mean	Lower Bound	-6.2665	
		Upper Bound	-3.2585	
	5% Trimmed Mean		-4.3889	
	Median		-3.0000	
	Variance		22.117	
	Std. Deviation		4.70285	
	Minimum		-18.20	
	Maximum		.40	
	Range		18.60	
	Interquartile Range		6.75	
	Skewness		-1.065	.374
	Kurtosis		.405	.733
SAvsE	Mean		-9.6500	1.14161
	95% Confidence Interval for Mean	Lower Bound	-11.9591	
		Upper Bound	-7.3409	
	5% Trimmed Mean		-9.1667	
	Median		-7.5000	
	Variance		52.131	
	Std. Deviation		7.22016	
	Minimum		-31.00	
	Maximum		-1.00	
	Range		30.00	
	Interquartile Range		10.00	
	Skewness		-.995	.374
	Kurtosis		.600	.733

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Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
LA	.204	40	.000	.907	40	.003
SA	.148	40	.027	.915	40	.005
E	.192	40	.001	.913	40	.005
LAvsSA	.198	40	.000	.828	40	.000
LAvsE	.197	40	.000	.879	40	.001
SAvsE	.143	40	.038	.909	40	.004

a. Lilliefors Significance Correction

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
LAvsSA	40	4.8875	4.66164	.73707
LAvsE	40	-4.7625	4.70285	.74359
SAvsE	40	-9.6500	7.22016	1.14161

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
LAvsSA	6.631	39	.000	4.88750	3.3966	6.3784
LAvsE	-6.405	39	.000	-4.76250	-6.2665	-3.2585
SAvsE	-8.453	39	.000	-9.65000	-11.9591	-7.3409

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
LAvsSA	40	4.8875	4.66164	-.50	20.00
LAvsE	40	-4.7625	4.70285	-18.20	.40
SAvsE	40	-9.6500	7.22016	-31.00	-1.00

One-Sample Kolmogorov-Smirnov Test

			LAvsSA	LAvsE	SAvsE
N			40	40	40
Normal Parameters[a,b]	Mean		4.8875	-4.7625	-9.6500
	Std. Deviation		4.66164	4.70285	7.22016
Most Extreme Differences	Absolute		.198	.197	.143
	Positive		.198	.136	.115
	Negative		-.127	-.197	-.143
Test Statistic			.198	.197	.143
Asymp. Sig. (2-tailed)			.000[c]	.000[c]	.038[c]
Monte Carlo Sig. (2-tailed)	Sig.		.175[d]	.175[d]	.500[d]
	95% Confidence Interval	Lower Bound	.057	.057	.345
		Upper Bound	.293	.293	.655

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Based on 40 sampled tables with starting seed 2000000.

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PAULINA YESSICA PRAMADITA MEGAPUTRI, Dr.dr.Lina Choridah, Sp.Rad (K) - PRP; dr.Sudarmanta Sp.Rad (K)
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Case Processing Summary

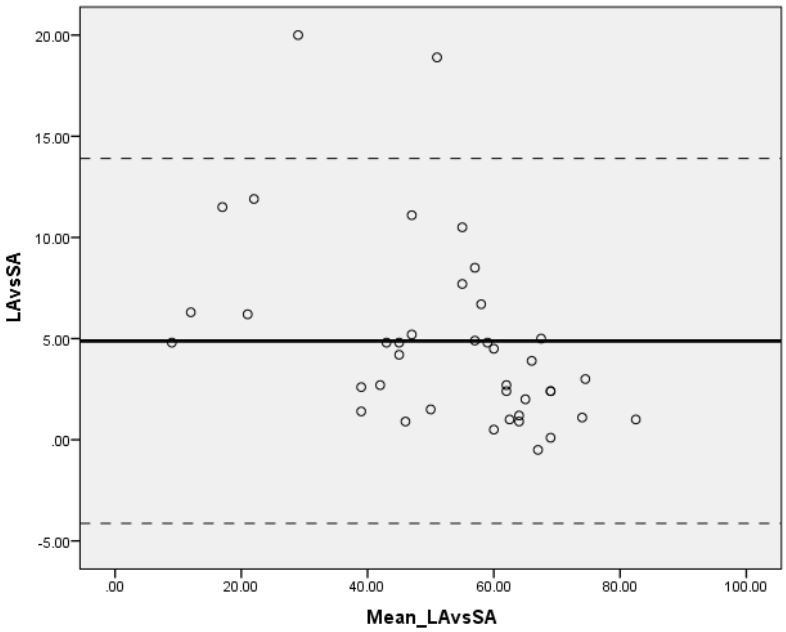
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
LA	40	100.0%	0	0.0%	40	100.0%
SA	40	100.0%	0	0.0%	40	100.0%
E	40	100.0%	0	0.0%	40	100.0%
LAvsSA	40	100.0%	0	0.0%	40	100.0%
LAvsE	40	100.0%	0	0.0%	40	100.0%
SAvsE	40	100.0%	0	0.0%	40	100.0%

Correlations

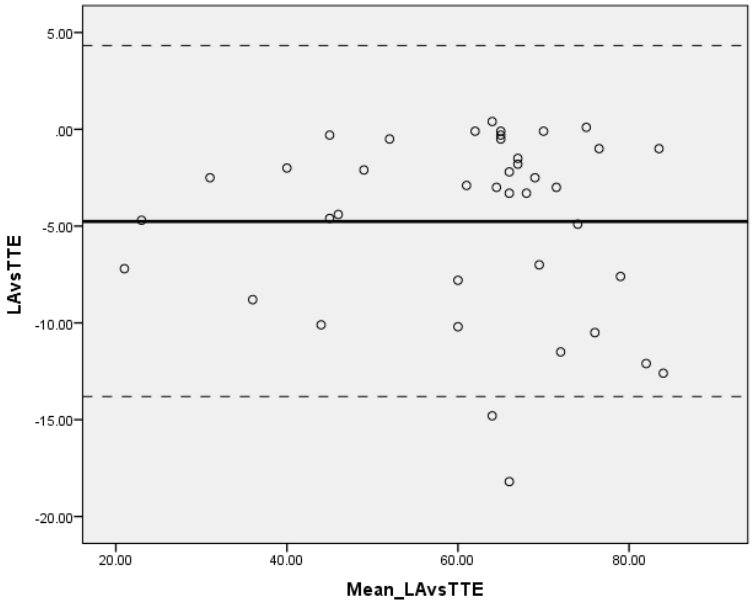
			LA	SA	E
Spearman's rho	LA	Correlation Coefficient	1.000	.936**	.938**
		Sig. (2-tailed)	.	.000	.000
		N	40	40	40
	SA	Correlation Coefficient	.936**	1.000	.863**
		Sig. (2-tailed)	.000	.	.000
		N	40	40	40
	E	Correlation Coefficient	.938**	.863**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	40	40	40

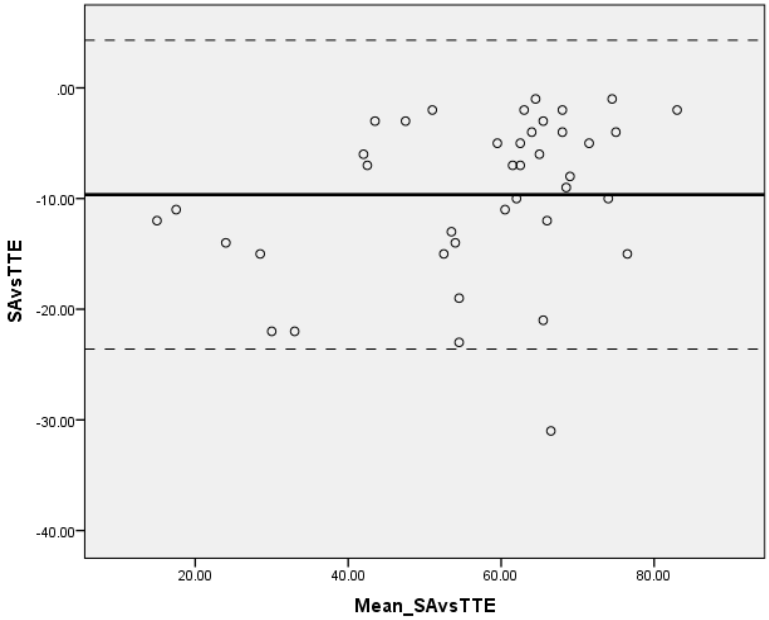
**. Correlation is significant at the 0.01 level (2-tailed).

4. Bland-Altman plot



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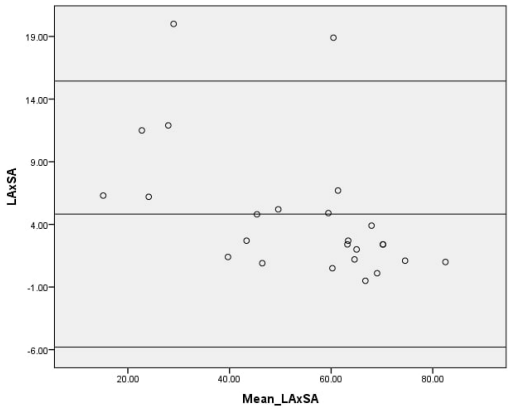


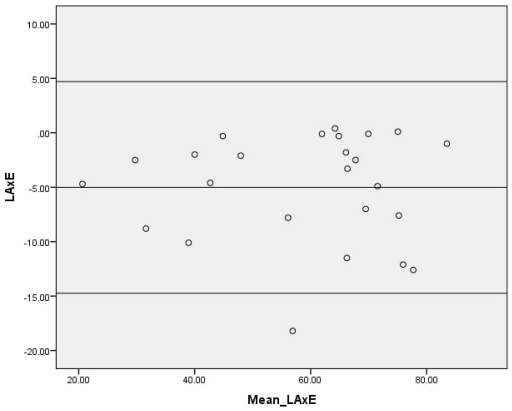


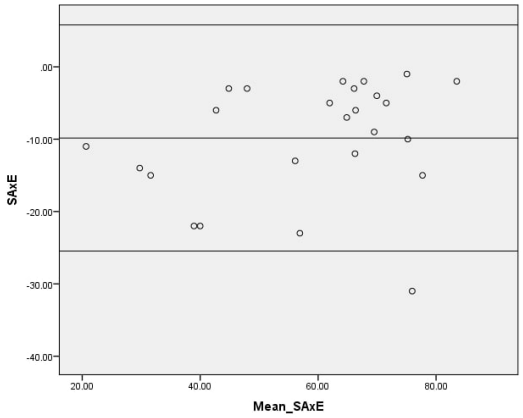
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5. Bland altman karakteristik pasien

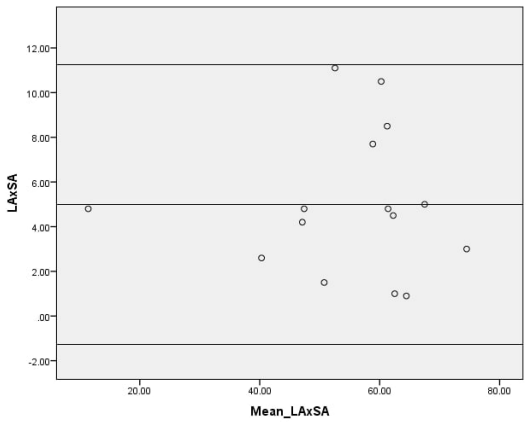
Jenis kelamin laki – laki

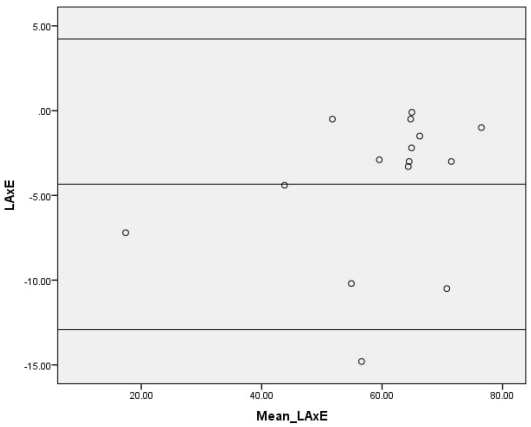




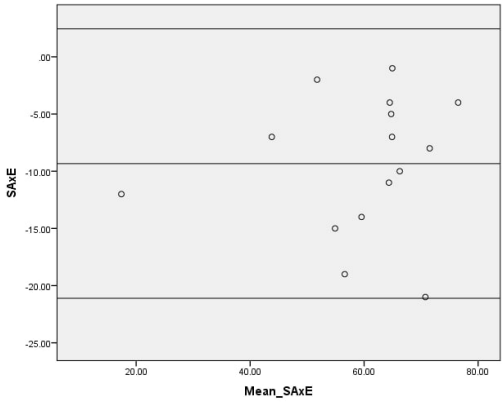


Jenis kelamin perempuan

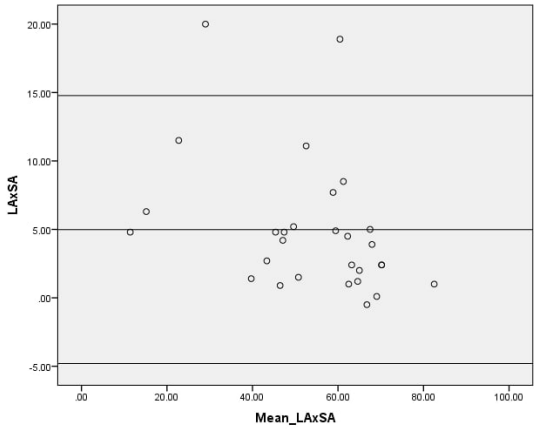


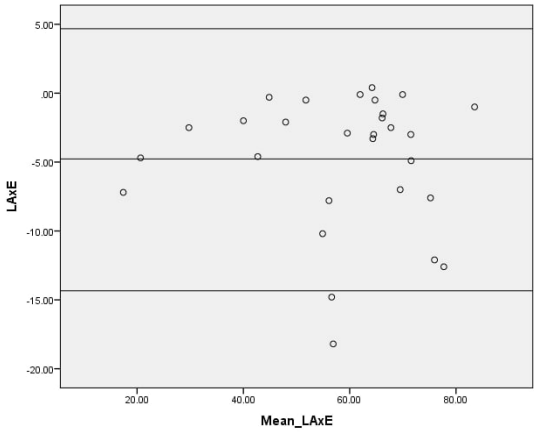


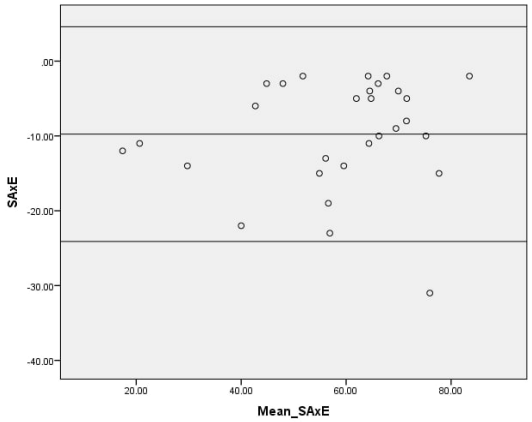
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Usia 19 – 59 tahun

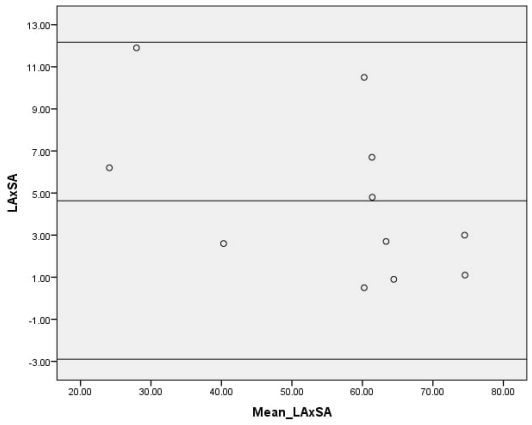


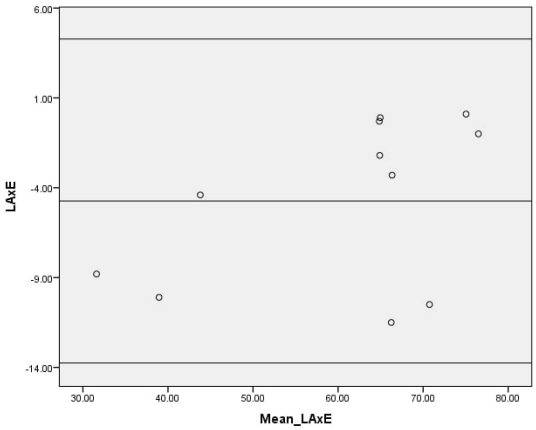


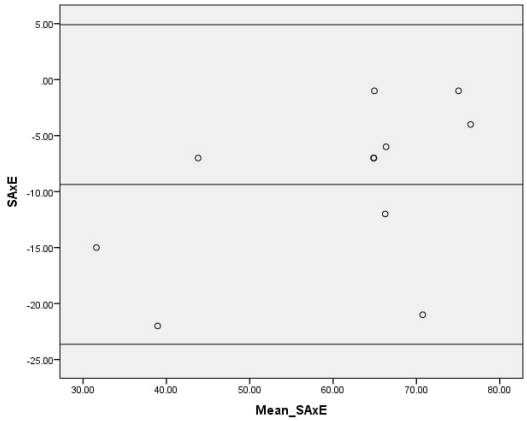


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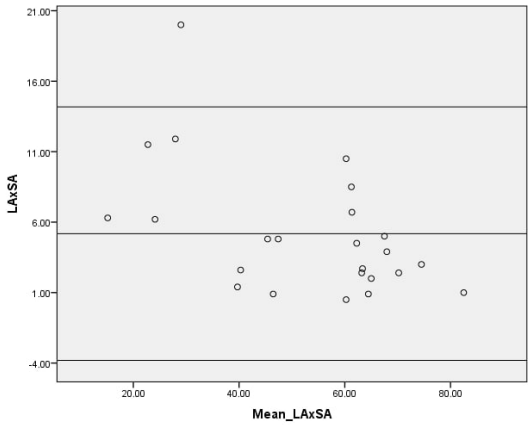
Usia > 60 tahun

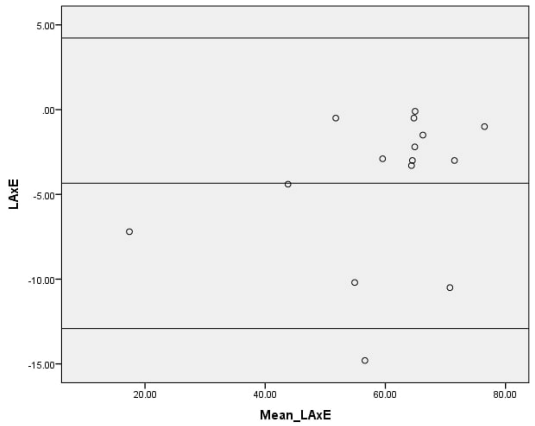




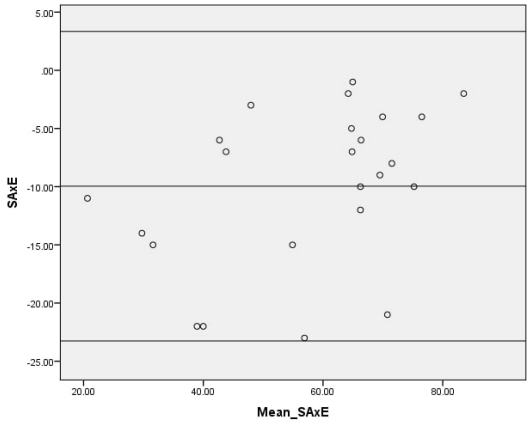


IMT *underweight* - normal

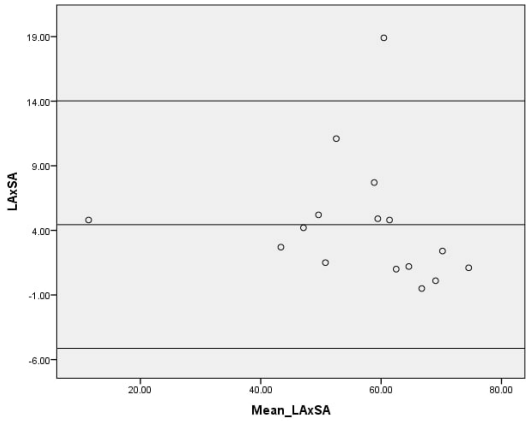


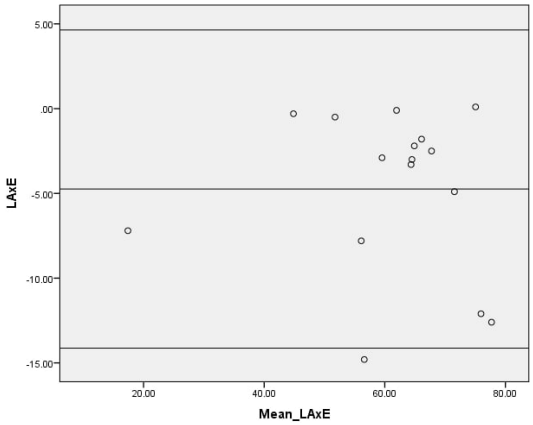


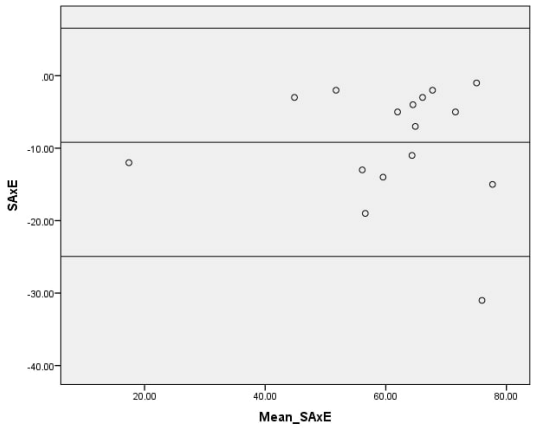
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IMT *overweight – obese*







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6. Hasil *trans thoracic echocardiography*

LAPORAN EKOKARDIOGRAFI TRANSTORAKAL (TTE)
RSUP DR. SARDJITO YOGYAKARTA

Tanggal :	20-May-22	Jenis kelamin :	L	Video :	T8
Nama :	**Arifin Honggowidjaja**	BB (kg) :	50		
Umur :	66 Tahun	TB (cm) :	163		
Status :	**Rawat jalan**	BMI (kg/m2) :	18,82	BSA (m2) :	1,52
RM :	2010904	Operator :	Ajeng / dr. Hasanah Mumpuni, Sp.PD, Sp.JP(K)		

Diagnosis : **VES**

Pengukuran		Nilai	Satuan (normal)	Pengukuran		Nilai	Satuan (normal)
Aorta		27	mm (20-39)	Ao Vmax		101	cm/s (≤250)
LA		36	mm (15-40)	EPSS		8	mm (<10)
LAVI		26	ml/m2 (16-34)	LA/Ao		1,33	1,1
LV study	LVIDd	49	mm (35-52)	IVS Fract		44,44	>30
	LVIDs	31	mm (26-36)	PW Fract		71,43	>30
	IVSd	9	mm (7-11)	IVS/PW ratio		1,08	<1,3
	IVSs	13	mm (-)	LV mass		131,20	67-162 (P), 88-224 (L)
	LVPWd	7	mm (7-11)	LVMI		86,2	≤95 (P), ≤115 (L)
	LVPWs	12	mm (-)	RWT		0,286	≤0.42
	EF (Simpson)	65	% (55-77)	Right heart study	PVAccT	137	ms (>120)
			% (55-77)		TAPSE	23	mm (17-22)
Diastolic function	e' lat	11	cm/s (≥10)		RA Area	13,6	cm² (<18)
	e' med	8	cm/s (≥7)		RV Ø	36	mm (27-40)
	E/A	1,2	(0.78-1.14)		IVC	12	mm (-)
	DT	166	ms (171-229)		Kolaps	<50	%
	E	108	cm/s (>10)		RA Pressure	8	mmHg (-)
	e'	9,50	cm/s (≥8)		mPAP	18	mmHg (<25)
	E/e'	11,37	(≤14)		TR velocity	2,3	m/s (≤2.8)

Temuan

Dimensi ruang jantung		LA dan LV tak dilatasi RA dan RV tak dilatasi
LV geometry		Normal geometry
Dinding jantung		IVS dan LVPW tak menebal IAS dan IVS intak
Wall motion		Normokinetik
Katup	Mitral	Anatomi dan fungsi normal
	Aorta	3 kuspis, Anatomi dan fungsi normal
	Trikuspid	Regurgitasi trivial, TVG 22 mmHg
	Pulmonal	Anatomi dan fungsi normal
Lainnya		Efusi perikard (-), efusi pleura (-)

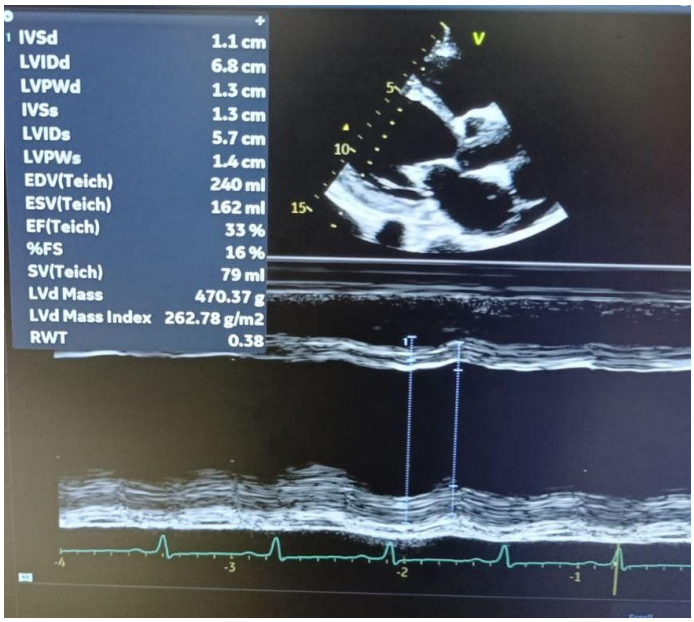
Kriteria ARVD (Revised Task Force Criteria 2010) : GLS LV -22,1 %, GLS RV -25,6 %
Regional RV akinesia (-) , dyskinesia (-), aneurysma (-) BSA : 1,52 , RV Wall : 6 mm
a. PLAX RVOT [≥ 32 mm (Mayor), 29-32 mm (Minor)] = 30 mm
b. PLAX RVOT/BSA [≥ 19 mm/m2 (Mayor), 16-19 mm/m2 (Minor)] = 19,7 mm/m2
c. PSAX RVOT [≥ 36 mm (Mayor), 32-36 mm (Minor)] = 30 mm
d. PSAX RVOT/BSA [≥ 21 mm/m2 (Mayor), 18-21 mm/m2 (Minor)] = 19,7 mm/m2
e. RV FAC [≤ 33 % (Mayor), 33-40 % (Minor)] = 46,7 %

Simpulan
Tidak memenuhi kriteria ARVD
Dimensi ruang jantung normal
Fungsi sistolik global dan segmental LV baik dengan EF 65 %
Fungsi diastolik LV normal
Fungsi sistolik RV normal
TR trivial, low probability of PH

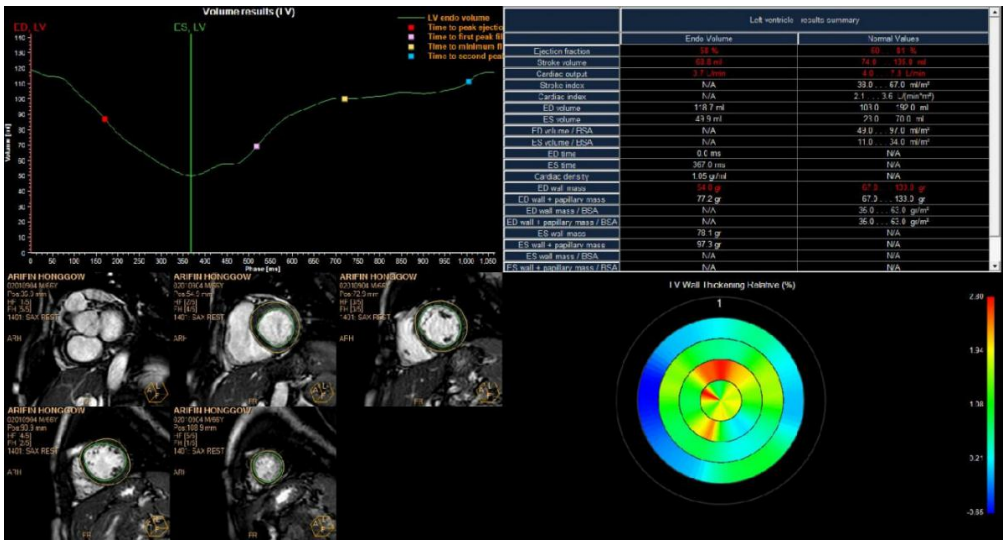
dr. Hasanah Mumpuni, Sp.PD, Sp.JP(K)

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7. Contoh pengukuran EF dengan TTE

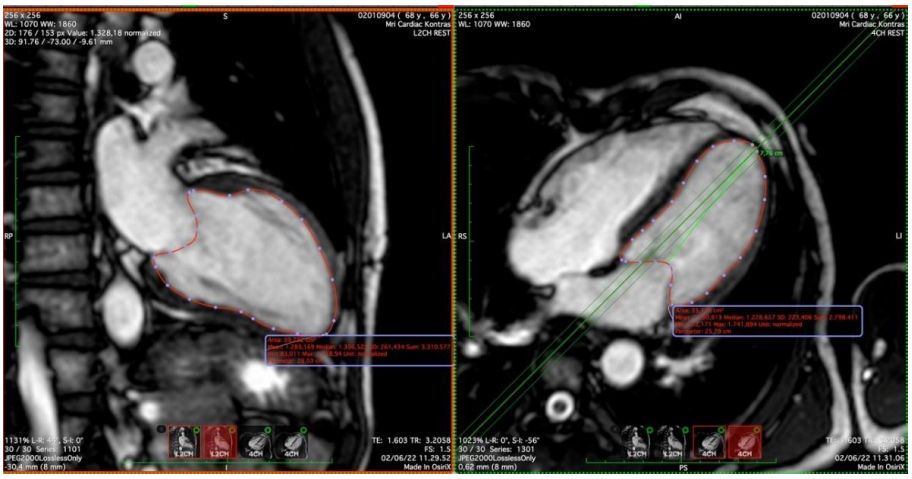


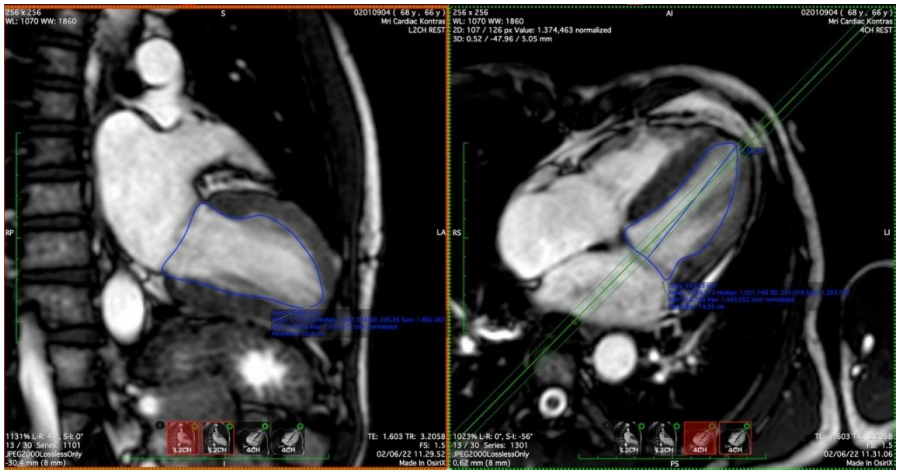
8. Delineasi pengukuran LVEF metode *short axis*

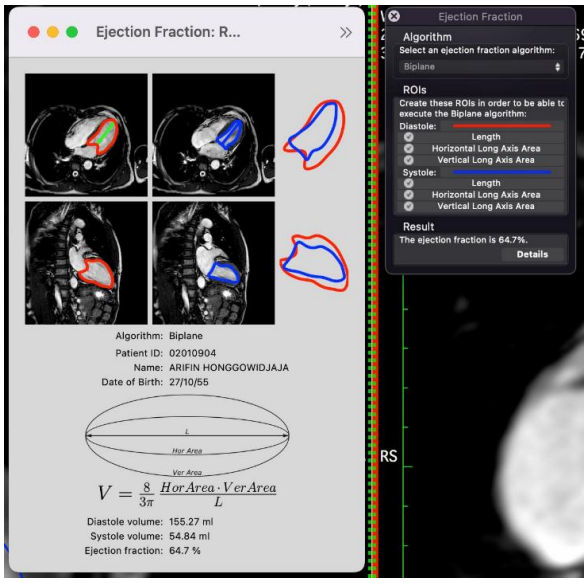


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9. Delineasi pengukuran LVEF metode *long axis*







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10. Ethical clearance

MEDICAL AND HEALTH RESEARCH ETHICS COMMITTEE (MHREC)
FACULTY OF MEDICINE, PUBLIC HEALTH AND NURSING
UNIVERSITAS GADJAH MADA – DR. SARDJITO GENERAL HOSPITAL

ETHICS COMMITTEE APPROVAL

Ref. No. : KE/FK/0364/EC/2024

Title of the Research Protocol	:	Perbandingan Pengukuran Fraksi Ejeksi Ventrikel Kiri Menggunakan Metode *Long Axis, Short Axis* MRI *Cardiac*, dan *Trans Thoracic Echocardiography*
Document(s) Approved and version	:	Study Protocol version 01 2024
Principle Investigator	:	Paulina Yessica Pramadita Megaputri
Participating Investigator(s)	:	1. Dr. dr. Lina Choridah, Sp.Rad(K) PRP. 2. dr. Sudarmanta, Sp.Rad(K) RI.
Date of Approval	:	14 MAR 2024 (Valid for one year beginning from the date of approval)
Institution(s)/place(s) of research	:	Instalasi Radiologi Diagnostik RSUP Dr. Sardjito Yogyakarta

The Medical and Health Research Ethics Committee (MHREC) states that the document above meets the ethical principle outlined in the International and National Guidelines on ethical standards and procedures for researches with human beings.

The Medical and Health Research Ethics Committee (MHREC) has the right to monitor the research activities at any time.

The investigator(s) is/are obliged to submit:
- Progress report as a continuing review (state its due time)
- Report of any serious adverse events (SAE)
- Final report upon the completion of the study

Prof. Dr. dr. Eti Nurwening S., M.Kes., M.Med.Ed., Sp.KKLP.
Panel's vice chairperson

dr. Rizka Humardewayanti A., Sp.PD-KPTI.
Panel's secretary

P.S. This letter uses signature scan of the panel's chairperson and Secretary of the Ethics Committee. The hardcopy official letter with authority's signature will be issued when it is possible and are kept as an archive of the Ethics Committee

Validation number : 65f25d82ced63 http://komisietk.fk.ugm.ac.id/validasi)

Recognized by Forum for Ethical Review Committees in Asia and the Western Pacific (FERCAP)
13-Mar-24

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11. Data sampel MRI *cardiac* dan TTE

No.	RM	Inisial	IMT	Jenis kelamin	Usia	EF (%)		
						Long Axis	**Short Axis**	**Echo**
1	2012174	SHP	24.82	L	65	27.2	21	36
2	2011820	TA	23.15	L	64	33.9	22	44
3	2010423	BU	29.3	L	46	52.2	47	60
4	2010904	AH	18.82	L	66	64.7	58	65
5	1876679	EM	24.80	L	53	18.3	12	23
6	1976587	SA	26.67	P	56	51.5	50	52
7	2018498	FZR	21.89	L	30	69.9	66	70
8	2017556	TUG	17.80	L	45	46.9	46	49
9	2023336	TUM	21.33	P	65	41.6	39	46
10	1983260	BWA	21.23	P	63	65.5	55	76
11	2018355	PRI	21.48	L	59	28.5	17	31
12	2014442	ISN	22.72	P	31	65.5	57	67
13	1929812	DE	28.58	P	31	62.7	55	66
14	2039943	SNA	27.06	P	45	13.8	9	21
15	2035256	PK	29.24	P	33	58.1	47	61
16	2046217	SD	24.61	L	42	66	64	73
17	1945435	PH	22.72	L	58	40.4	39	45
18	2052472	NSB	24.24	L	43	39	19	41
19	497037	SAH	23.88	L	71	64.7	62	68
20	2061303	IND	26.22	L	48	61.9	57	62
21	2062242	SUB	25.39	L	48	71.4	69	84
22	2066695	SUL	31.11	P	60	63.8	59	66
23	2068980	SUP	26.04	P	39	49.2	45	64
24	2199678	NM	24.89	P	46	64.5	60	65
25	2068267	AR	27.68	L	54	65.2	64	67
26	2202762	NMD	22.48	P	31	70	65	73
27	2051301	ARR	27.76	L	31	66.5	67	69
28	2043108	SUY	32.00	L	49	69.1	69	74
29	2048503	SCS	32.05	L	60	75.1	74	75
30	2205844	SAR	22.49	L	65	60.5	60	72
31	2067665	SUN	26.81	L	49	44.7	42	45
32	972108	IA	21.26	P	67	64.9	64	65
33	2215815	RAK	26.13	L	45	69.9	51	82
34	2209389	HRA	23.18	L	19	47.8	43	66
35	1854563	ROK	24.44	P	63	76	73	77
36	2216987	RS	19.59	L	23	71.4	69	79
37	2016304	TS	21.48	P	55	49.8	45	60
38	1419584	AL	36.98	P	45	63	62	66
39	2066080	YL	22.58	L	50	83	82	84
40	2026094	FR	20.75	L	24	64.4	62	64