

Lampiran 1 Pernyataan Keaslian Tulisan

PERNYATAAN KEASLIAN TULISAN

Saya yang bertanda tangan dibawah ini :

Nama : Diah Lusi Fajar Agustina
NIM : 1005070100111115
Progran Studi : Program Studi Pendidikan Dokter
Fakultas Kedokteran Universitas Brawijaya,

menyatakan dengan sebenarnya bahwa Tugas Akhir yang saya tulis ini benar-benar hasil karya, bukan merupakan pengambil alihan tulisan atau pikiran orang lain yang saya aku sebagai tulisan atau pikiran saya sendiri. Apabila dikemudian hari dapat dibuktikan bahwa Tugas Akhir ini adalah hasil jiplakan, maka saya bersedia menerima sanksi atas perbuatan tersebut.

Malang, 21 Januari 2015
Yang membuat pernyataan,

(Diah Lusi Fajar Agustina)
NIM. 115070100111115



Lampiran 2. Surat Keterangan Kelaikan Etik

65



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
THE MINISTRY OF EDUCATION AND CULTURE
FAKULTAS KEDOKTERAN UNIVERSITAS BRAWIJAYA
FACULTY OF MEDICINE UNIVERSITY OF BRAWIJAYA
KOMISI ETIK PENELITIAN KESEHATAN
HEALTH RESEARCH ETHICS COMMITTEE
Jalan Veteran Malang – 65145
Telp./ Fax. (62) 341 - 553930

KETERANGAN KELAIKAN ETIK ("ETHICAL CLEARANCE")

No. 016 / EC / KEPK / 01 / 2014

KOMISI ETIK PENELITIAN KESEHATAN FAKULTAS KEDOKTERAN UNIVERSITAS BRAWIJAYA, SETELAH MEMPELAJARI DENGAN SEKSAMA RANCANGAN PENELITIAN YANG DIUSULKAN, DENGAN INI MENYATAKAN BAHWA PENELITIAN DENGAN

JUDUL : Pengaruh Vitamin D terhadap Pembentukan Neutrophile Extracellular Traps yang Menginduksi Kerusakan Sel Endotel Pasien Lupus Eritematosus Sistemik

PENELITI UTAMA : Dr. dr. Kusworini, M.Kes, Sp.PK

ANGGOTA PENELITI : dr. Dian Hasanah, M.Biomed Ivan Andre Hartono
dr. Sri Sunarti, Sp.PD Nafisah Nur 'Aini
Benny Arie Pradana Keryasta Becik Kawuningan
Yona One Sidharta Diah Lusi Fajar agustina
Radhitio Adi Nugroho Elvira Sari Dewi

UNIT / LEMBAGA : Program Magister Ilmu Biomedik - Fakultas Kedokteran - Universitas Brawijaya Malang

TEMPAT PENELITIAN : Rumah Sakit Saiful Anwar, Laboratorium Biomedik, dan Laboratorium Mikrobiologi FKUB

DINYATAKAN LAIK ETIK.

Malang, 10 JAN 2014



Ketua,
Komisi Etik Penelitian Kesehatan

Prof. Dr. dr. Moch. Istiadid ES, SpS, SpBS, M.Hum

Catatan :

Keterangan Laik Etik Ini Berlaku 1 (Satu) Tahun Sejak Tanggal Dikeluarkan Pada Akhir Penelitian, Laporan Pelaksanaan Penelitian Harus Diserahkan Kepada KEPK-FKUB Dalam Bentuk Soft Ccopy. Jika Ada Perubahan Protokol Dan / Atau Perpanjangan Penelitian, Harus

Lampiran 3. Kriteria penilaian MEX SLEDAI

MEX SLEDAI

Nama _____ umur _____ tanggal _____

Masukkan bobot MEX SLEDAI
bila terdapat gambaran deskripsi pada saat pemeriksaan atau dalam 10 hari ini.

BOBOT	DESKRIPSI	DEFINISI
8	Gangguan neurologis	Psikosa. Gangguan kemampuan melaksanakan aktivitas fungsi normal dikarenakan gangguan persepsi realitas. Termasuk: halusinasi, inkoheren, kehilangan berasosiasi, isi pikiran yang dangkal, berfikir yang tidak logis, <i>bizzare</i>, disorganisasi atau bertingkah laku <i>kataton</i>. Eksklusi : uremia dan pemakaian obat. CVA (<i>Cerebrovascular accident</i>) : Sindrom baru. Eksklusi arteriosklerosis. Kejang: Onset baru, eksklusi metabolik, infeksi, atau pemakaian obat. Sindrom otak organik : Keadaan berubahnya fungsi mental yang ditandai dengan gangguan orientasi, memori atau fungsi intelektual lainnya dengan onset yang cepat, gambaran klinis yang berfluktuasi. Seperti : a) kesadaran yang berkabut dengan berkurangnya kapasitas untuk memusatkan pikiran dan ketidak mampuan memberikan perhatian terhadap lingkungan, disertai dengan sedikitnya 2 dari b) gangguan persepsi; berbicara melantur; <i>insomnia</i> atau perasaan mengantuk sepanjang hari; meningkat atau menurunnya aktivitas psikomotor. Eksklusi penyebab metabolik, infeksi atau penggunaan obat. Mononeuritis: Defisit sensorik atau motorik yang baru disatu atau lebih saraf kranial atau perifer. Myelitis: Paraplegia dan/atau gangguan mengontrol BAK/BAB dengan onset yang baru. Eksklusi penyebab lainnya
6	Gangguan ginjal	<i>Castc</i>, <i>Heme granular</i> atau sel darah merah. Haematuria. >5 /lpb. Eksklusi penyebab lainnya (batu/infeksi) Proteinuria. Onset baru, >0.5g/l pada random spesimen. Peningkatan kreatinin (> 5 mg/dl)
4	Vaskulitis	Ulserasi, gangren, nodul pada jari yang lunak, infark <i>periungual</i>, <i>splinter haemorrhages</i>. Data biopsi atau angiogram dari vaskulitis.
3	Hemolisis	Hb<12.0 g/dl dan koreksi retikulosit > 3%.
	Trombositopeni	Trombositopeni : < 100.000. Bukan disebabkan oleh obat
3	Miositis	Nyeri dan lemahnya otot-otot proksimal, yang dihubungkan dengan peningkatan CPK
2	Artritis	Pembengkakan atau efusi lebih dari 2 sendi.
2	Gangguan Mukokutaneous	Ruam malar. Onset baru atau malar erithema yang menonjol. <i>Mucous ulcers</i>. Oral atau nasopharyngeal ulserasi dengan onset baru atau berulang. Abnormal Alopecia. Kehilangan sebagian atau seluruh rambut atau mudahnya rambut rontok.

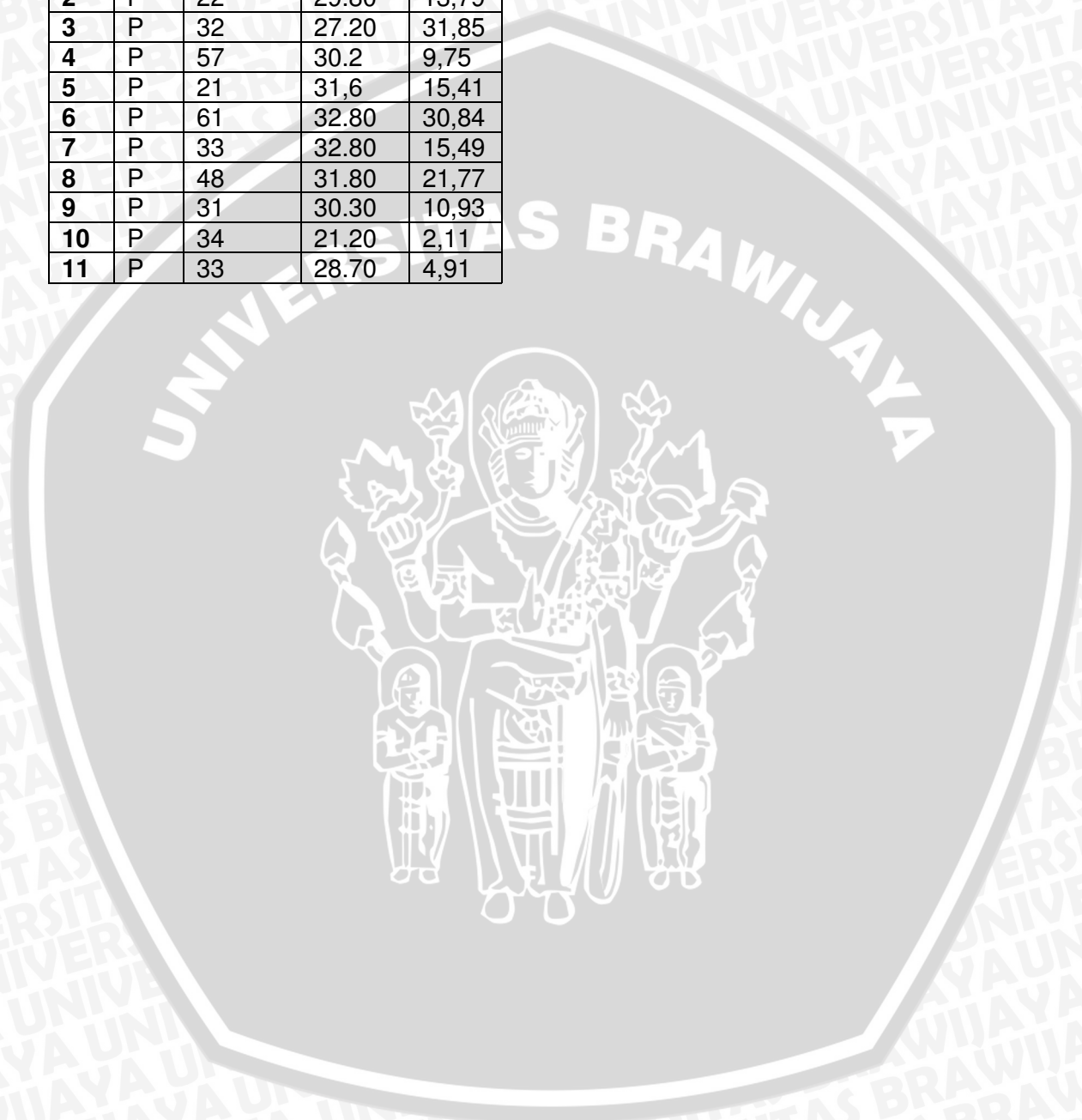
Lampiran 4. Data Mentah Hasil Penelitian

1. Data kelompok pasien LES

N o	Se x	Usia (Ta- hun)	Vit. D (ng/ml)	LDG s (%)	MEX SLEDA I	Ar thriti s	Ne friti s	Mala r Rash	Lama diagnosi s (bulan)
1	P	27	29.5	18,27		✓			38
2	P	36	19.7	42,9	0				86
3	P	27	16.8	64,06	9		✓		62
4	P	25	20.9	18,29					74
5	P	50	21.1	44,63	2				38
6	P	36	28.3	52,87	6		✓		14
7	P	43	15	32,54	2				38
8	P	22	14.2	77,4	6	✓			26
9	P	35	23.9	6,67					74
10	P	66	20.3	55,42					26
11	P	26	20.2	11,66	2				2
12	P	18	18.7	38,26	4	✓		✓	2
13	P	19	16.2	16,51	4		✓		14
14	P	20	22.6	29,51	5	✓		✓	26
15	P	29	22.4	18,29	3	✓			28
16	P	49	15.3	30,72					74
17	P	39	29.3	31,73	9				26
18	P	39	22	94,89	1				50
19	P	22	21.9	66,05	1				2
20	P	36	26,1	38,54	8				38
21	P	36	26.4	43,73	15		✓		
22	P	38	28.3	28,42	3				

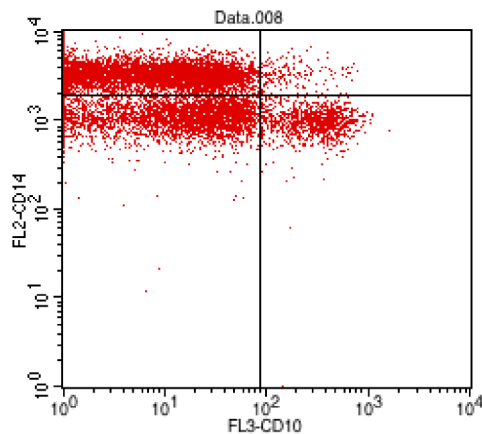
2. Data Kelompok Kontrol

No	Sex	Usia (Tahun)	Vit. D (ng/ml)	LDGs (%)
1	P	11	30.10	7,72
2	P	22	29.80	13,79
3	P	32	27.20	31,85
4	P	57	30.2	9,75
5	P	21	31,6	15,41
6	P	61	32.80	30,84
7	P	33	32.80	15,49
8	P	48	31.80	21,77
9	P	31	30.30	10,93
10	P	34	21.20	2,11
11	P	33	28.70	4,91



Lampiran 5. Hasil Pembacaan *Flow Cytometry*

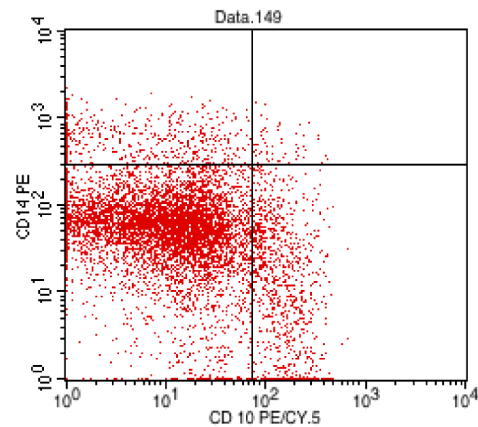
1. Kelompok kontrol



Sample ID: Lusi (K1) Acquisition Date: 02-Sep-13

Quad	Events	% Gated	% Total
UL	45071	62.14	3.64
UR	925	1.28	0.07
LL	20939	28.87	1.69
LR	5601	7.72	0.45

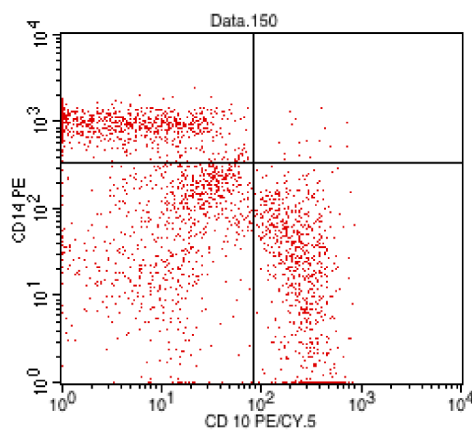
1



Sample ID: K4 Acquisition Date: 18-Sep-13

Quad	Events	% Gated	% Total
UL	507	6.24	0.45
UR	57	0.70	0.05
LL	6440	79.27	5.67
LR	1120	13.79	0.99

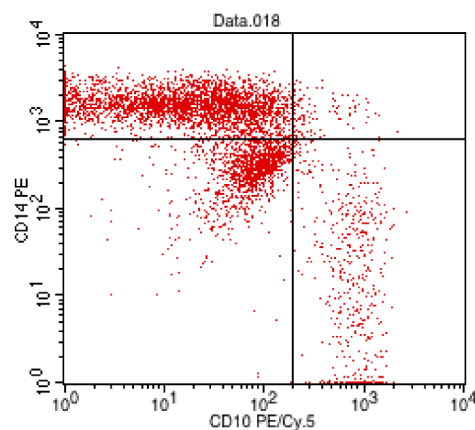
2



Sample ID: K5 Acquisition Date: 18-Sep-13

Quad	Events	% Gated	% Total
UL	811	33.72	0.27
UR	17	0.71	0.01
LL	811	33.72	0.27
LR	766	31.85	0.25

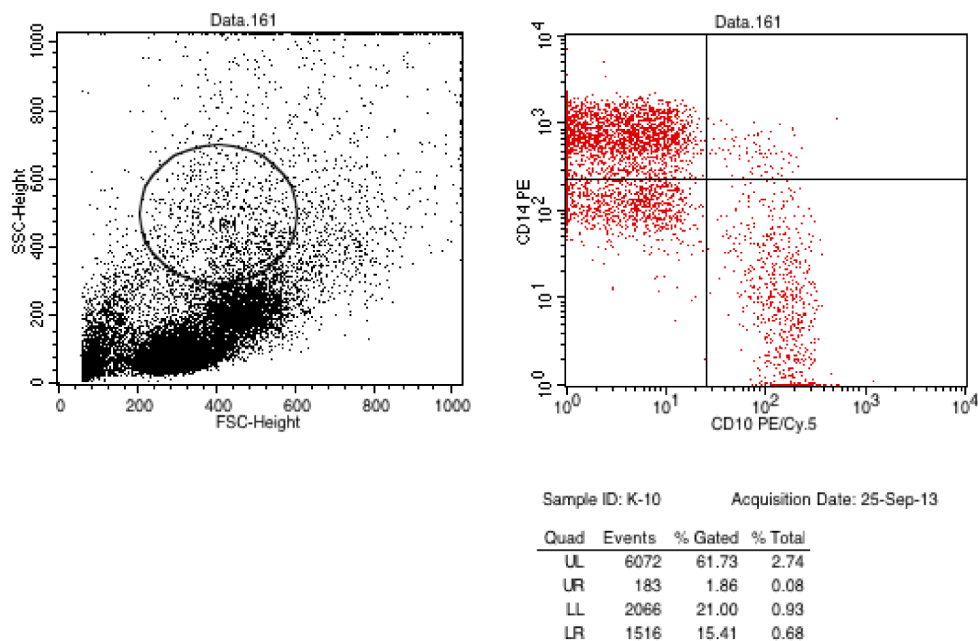
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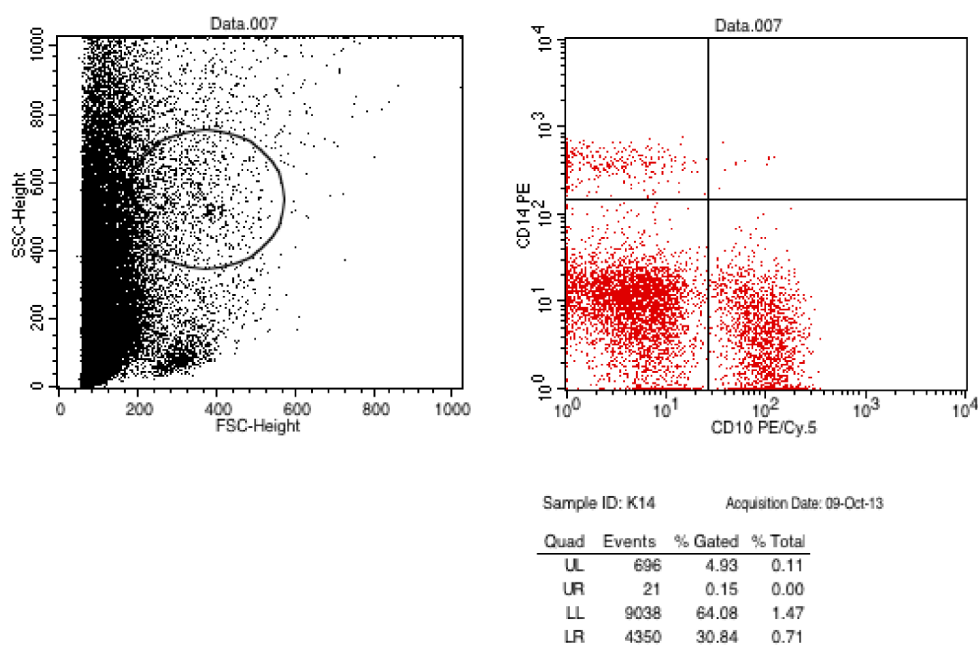
Sample ID: K8-Ny.Rusmawati Acquisition Date: 23-S

Quad	Events	% Gated	% Total
UL	6906	62.08	2.30
UR	195	1.75	0.06
LL	2938	26.41	0.98
LR	1085	9.75	0.36

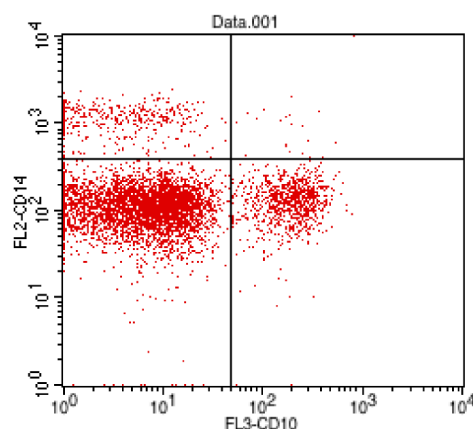
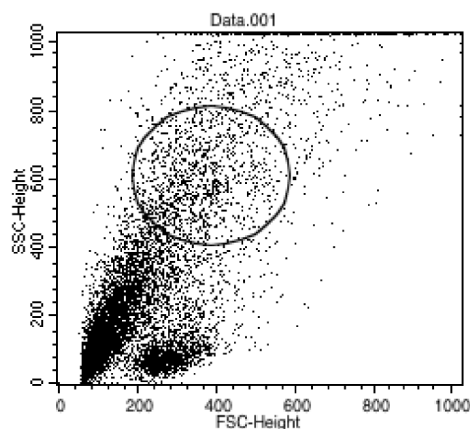
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5



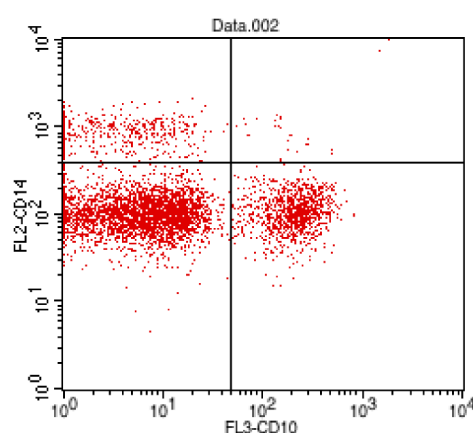
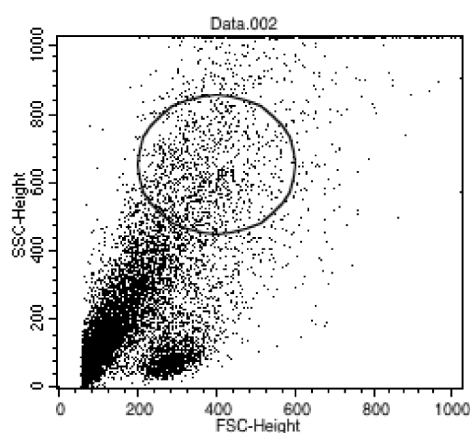
6



Sample ID: K15 Acquisition Date: 21-Oct-13

Quad	Events	% Gated	% Total
UL	1005	8.48	0.99
UR	42	0.35	0.04
LL	8967	75.68	8.84
LR	1835	15.49	1.81

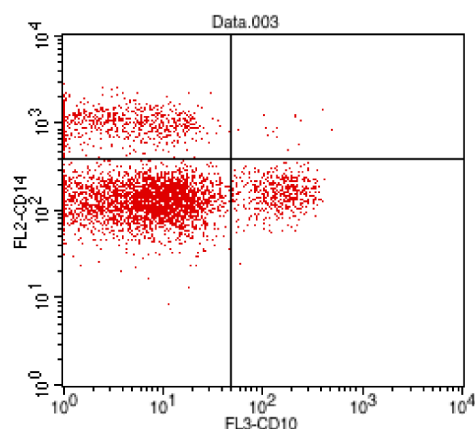
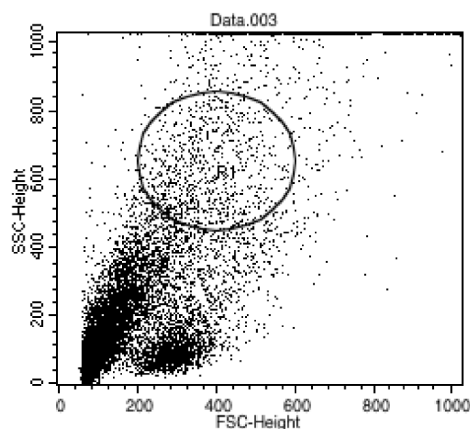
7



Sample ID: K16 Acquisition Date: 21-Oct-13

Quad	Events	% Gated	% Total
UL	919	9.13	0.86
UR	45	0.45	0.04
LL	6910	68.65	6.45
LR	2191	21.77	2.05

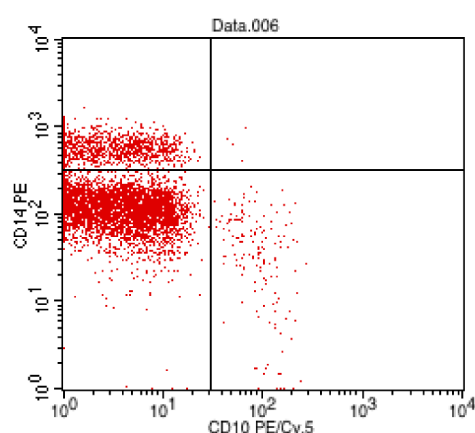
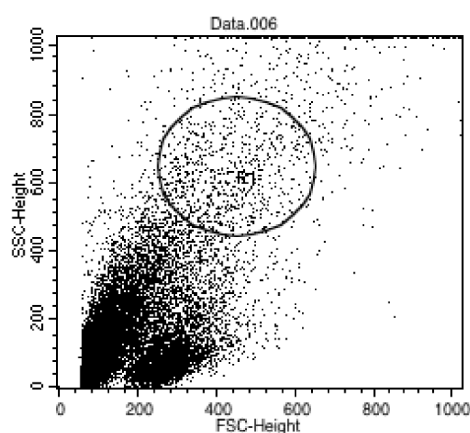
8



Sample ID: K17 Acquisition Date: 21-Oct-13

Quad	Events	% Gated	% Total
UL	1565	17.77	1.21
UR	40	0.45	0.03
LL	6238	70.85	4.83
LR	962	10.93	0.74

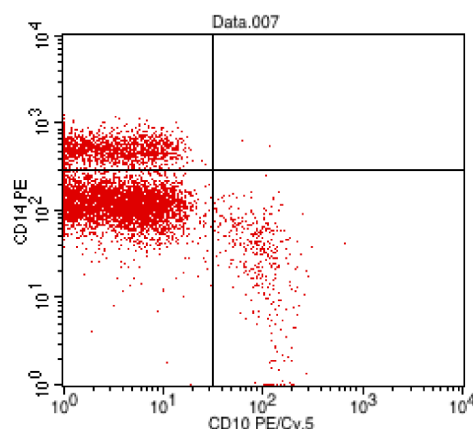
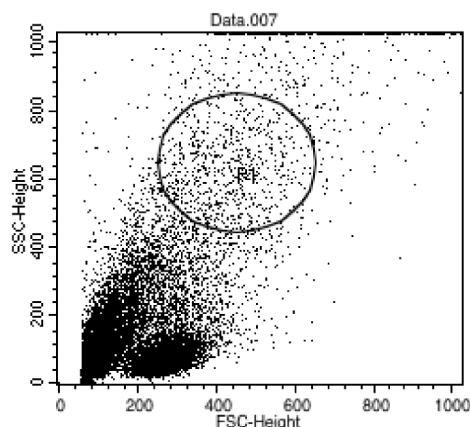
9



Sample ID: K.19 Acquisition Date: 23-Oct-13

Quad	Events	% Gated	% Total
UL	1645	22.68	0.85
UR	4	0.06	0.00
LL	5450	75.15	2.82
LR	153	2.11	0.08

10

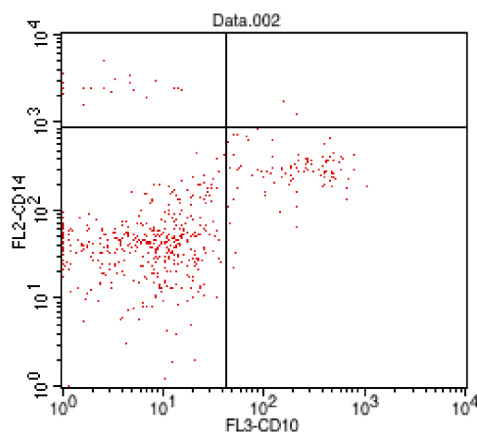


Sample ID: K.20 Acquisition Date: 23-Oct-13

Quad	Events	% Gated	% Total
UL	2137	27.92	1.14
UR	2	0.03	0.00
LL	5139	67.14	2.75
LR	376	4.91	0.20

11

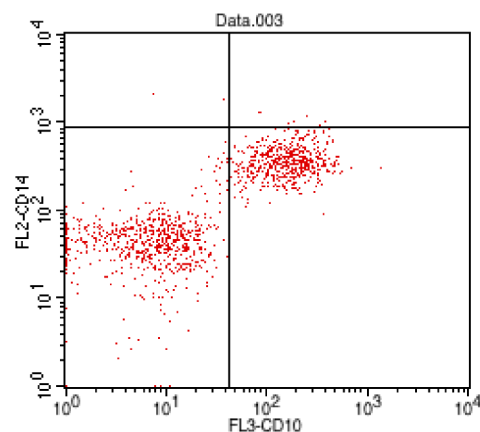
2. Kelompok Pasien LES



Sample ID: Anis Wiji Acquisition Date: 19-Aug-13

Quad	Events	% Gated	% Total
UL	19	3.51	0.01
UR	2	0.37	0.00
LL	422	77.86	0.19
LR	99	18.27	0.04

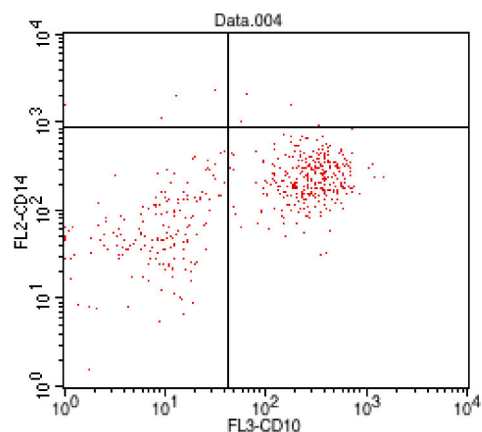
1



Sample ID: Miftahul Jannah Acquisition Date: 19-Aug

Quad	Events	% Gated	% Total
UL	2	0.16	0.00
UR	7	0.55	0.01
LL	719	56.39	1.20
LR	547	42.90	0.91

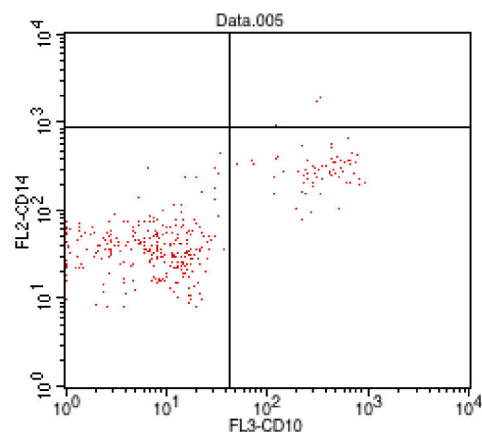
2



Sample ID: Nur Fitria Acquisition Date: 19-Aug-13

Quad	Events	% Gated	% Total
UL	4	0.80	0.00
UR	4	0.80	0.00
LL	171	34.34	0.20
LR	319	64.06	0.38

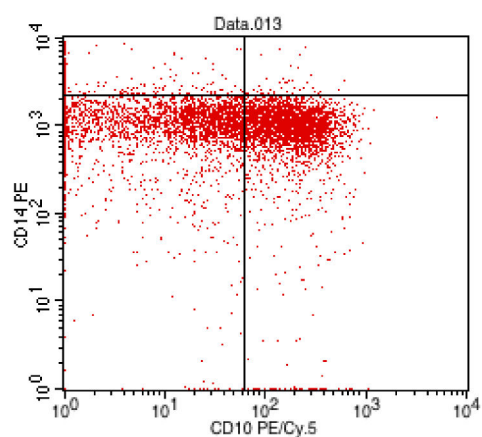
3



Sample ID: Yunita Acquisition Date: 19-Aug-13

Quad	Events	% Gated	% Total
UL	0	0.00	0.00
UR	3	0.87	0.00
LL	279	80.87	0.35
LR	63	18.26	0.08

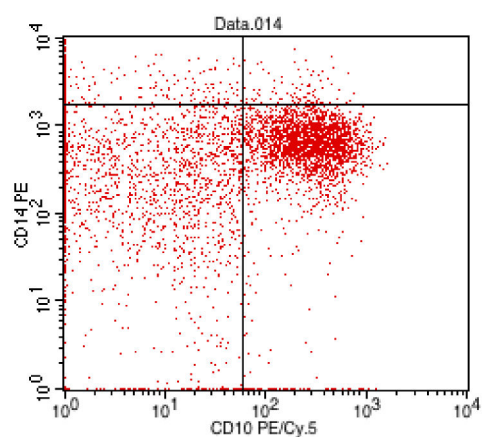
4



Sample ID: Rawati Acquisition Date: 28-Aug-13

Quad	Events	% Gated	% Total
UL	629	4.41	0.29
UR	77	0.54	0.04
LL	7186	50.42	3.27
LR	6361	44.63	2.90

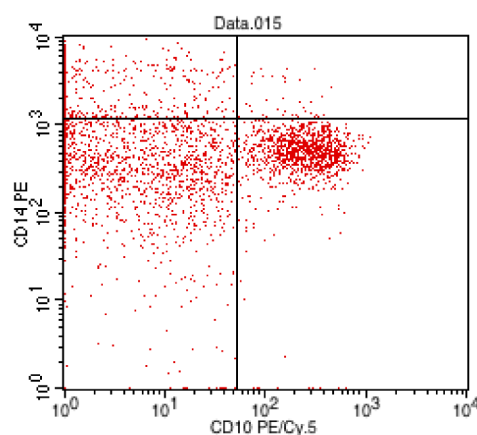
5



Sample ID: Yeni Apriana Acquisition Date: 28-Aug-13

Quad	Events	% Gated	% Total
UL	493	4.71	0.19
UR	208	1.99	0.08
LL	4228	40.43	1.65
LR	5529	52.87	2.15

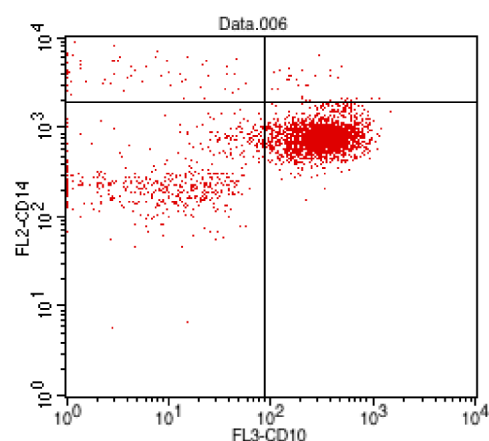
6



Sample ID: Yulianti Acquisition Date: 28-Aug-13

Quad	Events	% Gated	% Total
UL	1128	15.85	0.32
UR	85	1.19	0.02
LL	3588	50.41	1.00
LR	2316	32.54	0.65

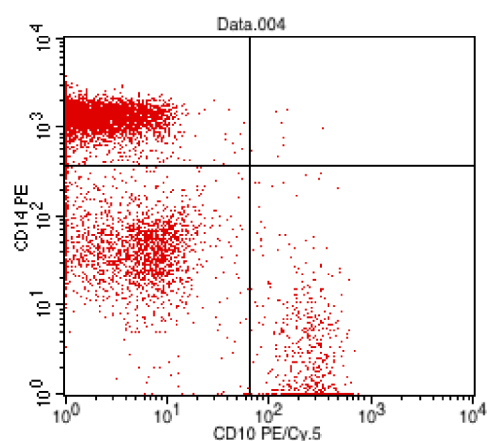
7



Sample ID: Elvira Acquisition Date: 02-Sep-13

Quad	Events	% Gated	% Total
UL	62	2.15	0.03
UR	37	1.28	0.02
LL	552	19.17	0.25
LR	2229	77.40	1.03

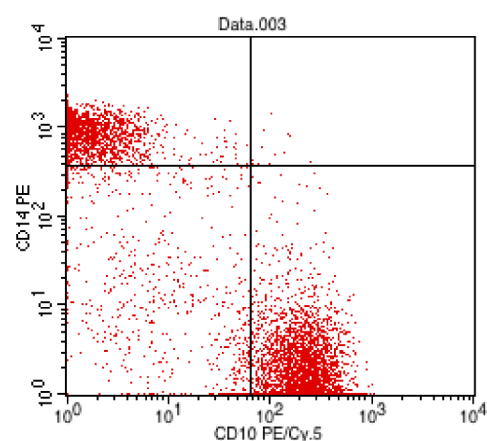
8



Sample ID: 11 Acquisition Date: 05-Sep-13

Quad	Events	% Gated	% Total
UL	7375	73.75	3.00
UR	8	0.08	0.00
LL	1950	19.50	0.79
LR	667	6.67	0.27

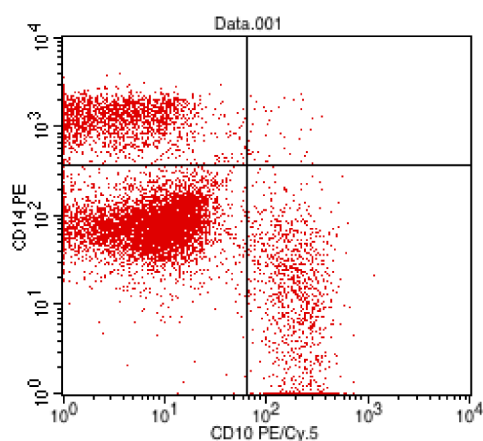
9



Sample ID: 12 Acquisition Date: 05-Sep-13

Quad	Events	% Gated	% Total
UL	3677	36.77	5.32
UR	15	0.15	0.02
LL	766	7.66	1.11
LR	5542	55.42	8.02

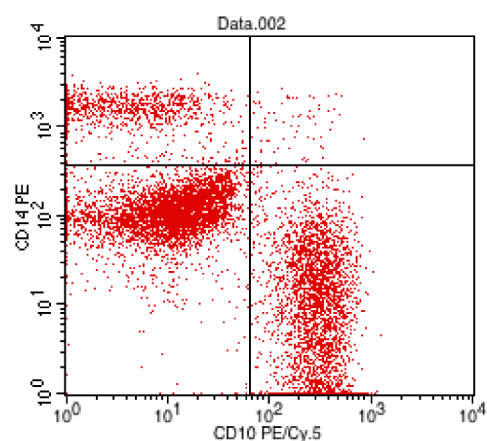
10



Sample ID: 14 Acquisition Date: 05-Sep-13

Quad	Events	% Gated	% Total
UL	2650	26.50	1.47
UR	42	0.42	0.02
LL	6142	61.42	3.40
LR	1166	11.66	0.65

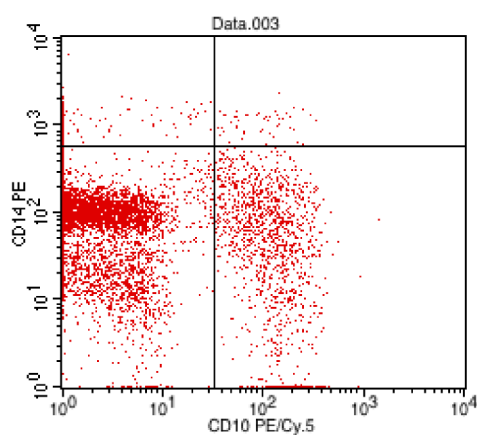
11



Sample ID: 15 Acquisition Date: 05-Sep-13

Quad	Events	% Gated	% Total
UL	1342	13.42	0.57
UR	75	0.75	0.03
LL	4757	47.57	2.01
LR	3826	38.26	1.61

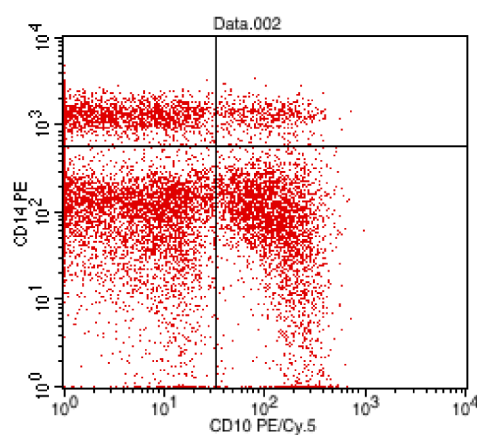
12



Sample ID: 16 Acquisition Date: 09-Sep-13

Quad	Events	% Gated	% Total
UL	168	2.19	0.03
UR	50	0.65	0.01
LL	6188	80.65	0.98
LR	1267	16.51	0.20

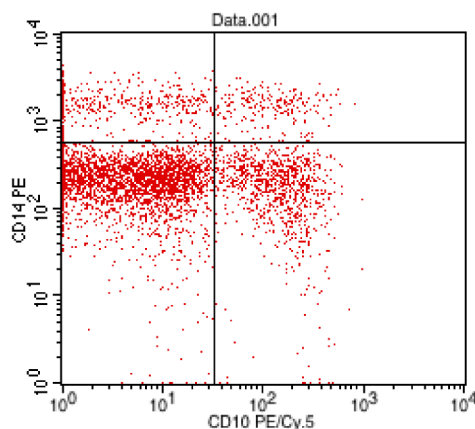
13



Sample ID: 17 Acquisition Date: 09-Sep-13

Quad	Events	% Gated	% Total
UL	2632	22.31	0.41
UR	496	4.20	0.08
LL	5190	43.98	0.81
LR	3482	29.51	0.55

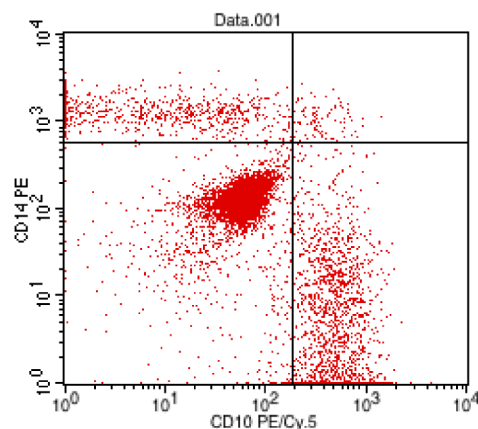
14



Sample ID: 18 Acquisition Date: 09-Sep-13

Quad	Events	% Gated	% Total
UL	503	9.87	0.21
UR	230	4.51	0.10
LL	3430	67.32	1.45
LR	932	18.29	0.39

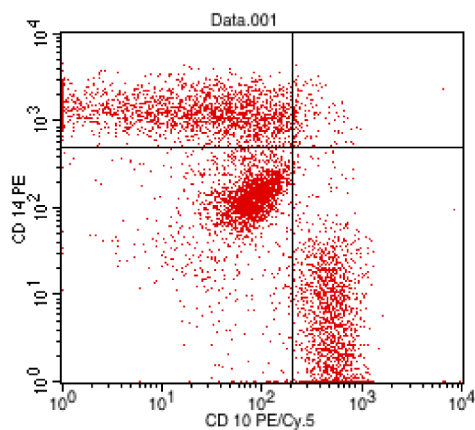
15



Sample ID: 19 Acquisition Date: 11-Sep-13

Quad	Events	% Gated	% Total
UL	750	9.81	0.14
UR	95	1.24	0.02
LL	4452	58.23	0.81
LR	2349	30.72	0.43

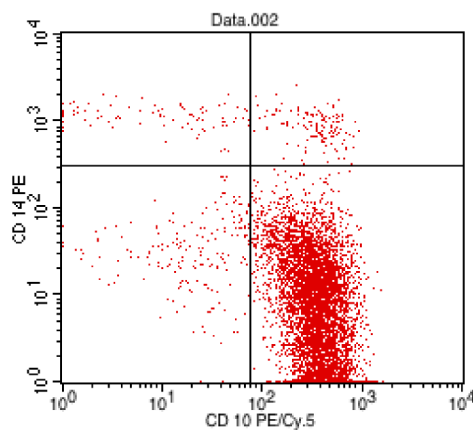
16



Sample ID: 19 Acquisition Date: 16-Sep-13

Quad	Events	% Gated	% Total
UL	1914	29.73	0.48
UR	145	2.25	0.04
LL	2337	36.29	0.59
LR	2043	31.73	0.52

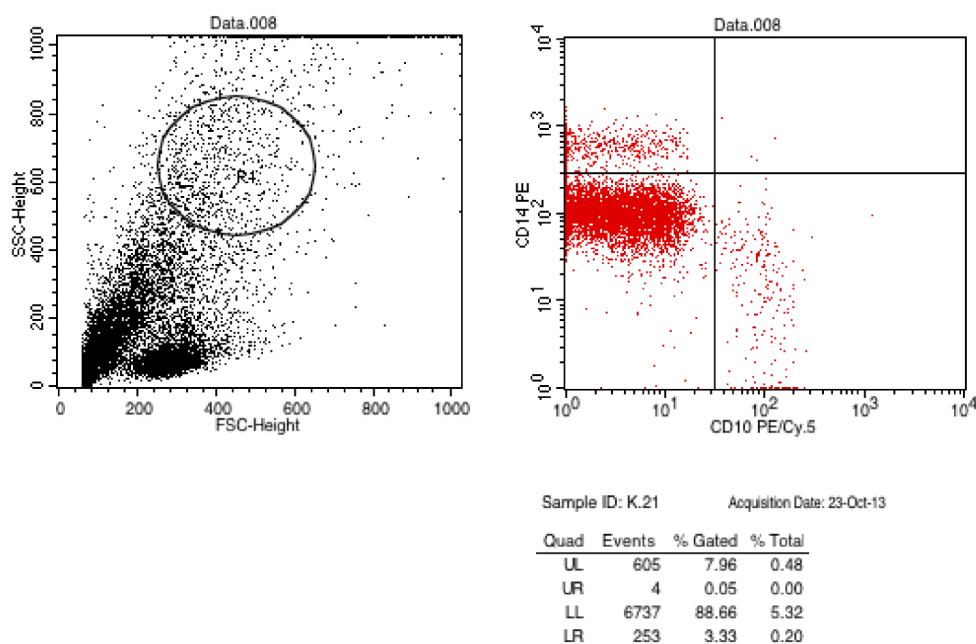
17



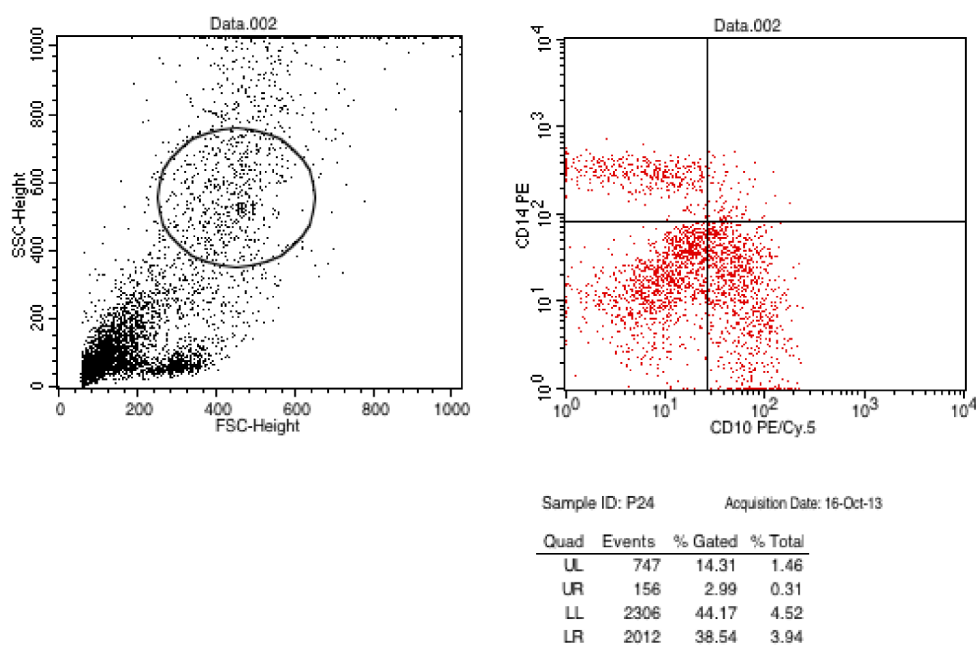
Sample ID: 20 Acquisition Date: 16-Sep-13

Quad	Events	% Gated	% Total
UL	88	1.08	0.11
UR	137	1.68	0.17
LL	192	2.35	0.24
LR	7738	94.89	9.57

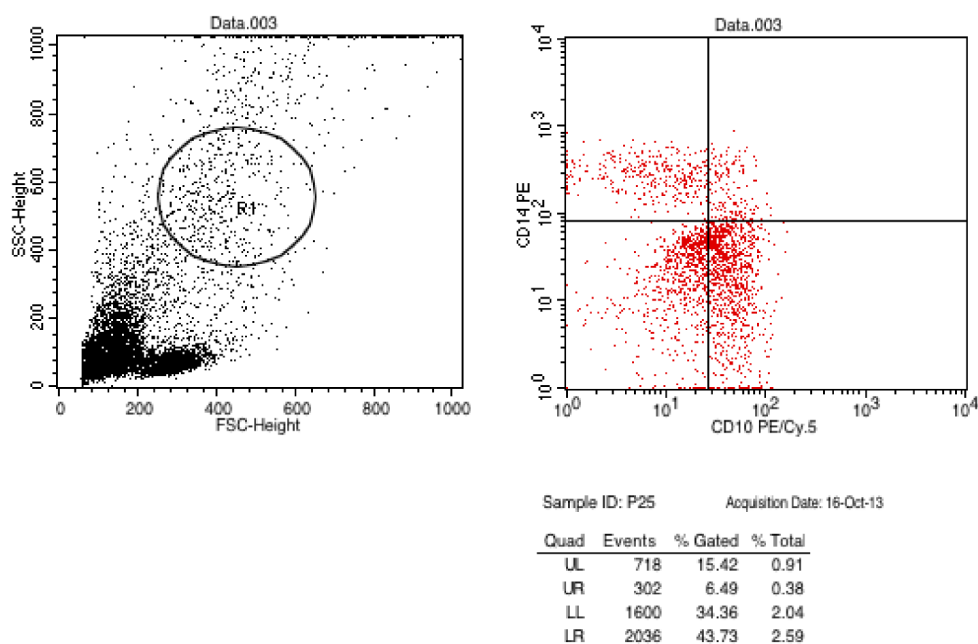
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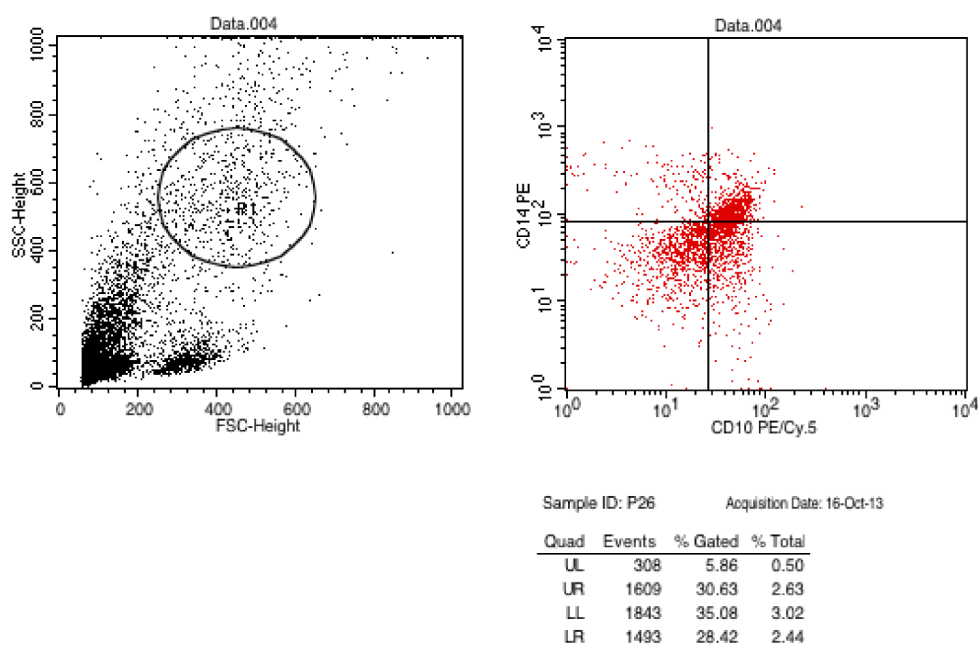
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Lampiran 6. Analisis Data dengan Program SPSS 17,0

1. Deskripsi data usia kelompok pasien LES

Descriptives

		Statistic	Std. Error
Usia	Mean	33.5455	2.50431
95% Confidence Interval for Mean	Lower Bound	28.3375	
	Upper Bound	38.7534	
	5% Trimmed Mean	32.6818	
	Median	35.5000	
	Variance	137.974	
	Std. Deviation	11.74623	
	Minimum	18.00	
	Maximum	66.00	
	Range	48.00	
	Interquartile Range	14.75	
	Skewness	.955	.491
	Kurtosis	1.299	.953

2. Deskripsi data lama sakit kelompok pasien LES

Descriptives

		Statistic	Std. Error
lamaSakit	Mean	36.9000	5.75916
95% Confidence Interval for Mean	Lower Bound	24.8459	
	Upper Bound	48.9541	
	5% Trimmed Mean	36.1111	
	Median	33.0000	
	Variance	663.358	
	Std. Deviation	25.75574	
	Minimum	2.00	
	Maximum	86.00	
	Range	84.00	
	Interquartile Range	42.00	

Skewness	.453	.512
Kurtosis	-.751	.992

3. Deskripsi data MEX SLEDAI kelompok pasien LES

Descriptives

	Statistic	Std. Error
MEXSLEDAI Mean	4.7059	.93055
95% Confidence Interval for Mean		
Lower Bound	2.7332	
Upper Bound	6.6786	
5% Trimmed Mean	4.3954	
Median	4.0000	
Variance	14.721	
Std. Deviation	3.83674	
Minimum	.00	
Maximum	15.00	
Range	15.00	
Interquartile Range	5.00	
Skewness	1.271	.550
Kurtosis	1.839	1.063

4. Deskripsi data usia kelompok kontrol

Descriptives

	Statistic	Std. Error
UsiaKontrol Mean	35.7273	4.17589
95% Confidence Interval for Mean		
Lower Bound	26.4228	
Upper Bound	45.0317	
5% Trimmed Mean	35.1414	
Median	33.0000	
Variance	191.818	
Std. Deviation	13.84984	
Minimum	21.00	
Maximum	61.00	
Range	40.00	

Interquartile Range	26.00	
Skewness	.848	.661
Kurtosis	-.351	1.279

5. Deskripsi data hasil pemeriksaan kadar vitamin D

Sampel			Statistic	Std. Error
VitaminD	Kontrol	Mean	29.6818	.98865
		95% Confidence Interval for Lower Bound	27.4790	
		Mean Upper Bound	31.8847	
		5% Trimmed Mean	29.9798	
		Median	30.2000	
		Variance	10.752	
		Std. Deviation	3.27897	
		Minimum	21.20	
		Maximum	32.80	
		Range	11.60	
		Interquartile Range	3.10	
		Skewness	-1.903	
		Kurtosis	4.457	1.279
Pasien LES		Mean	21.7773	1.00634
		95% Confidence Interval for Lower Bound	19.6845	
		Mean Upper Bound	23.8701	
		5% Trimmed Mean	21.7662	
		Median	21.5000	
		Variance	22.280	
		Std. Deviation	4.72016	
		Minimum	14.20	
		Maximum	29.50	
		Range	15.30	
		Interquartile Range	7.95	
		Skewness	.135	.491
		Kurtosis	-.917	.953

6. Deskripsi data hasil pemeriksaan jumlah LDGs

Sampel			Statistic	Std. Error
LDGs	Kontrol	Mean	14.9609	2.93506
		95% Confidence Interval for Mean	Lower Bound 8.4212	
			Upper Bound 21.5006	
		5% Trimmed Mean	14.7366	
		Median	13.7900	
		Variance	94.760	
		Std. Deviation	9.73449	
		Minimum	2.11	
		Maximum	31.85	
		Range	29.74	
		Interquartile Range	14.05	
		Skewness	.717	.661
		Kurtosis	-.322	1.279
Pasien LES		Mean	39.1527	4.75382
		95% Confidence Interval for Mean	Lower Bound 29.2666	
			Upper Bound 49.0388	
		5% Trimmed Mean	37.9239	
		Median	35.4000	
		Variance	497.174	
		Std. Deviation	22.29741	
		Minimum	6.67	
		Maximum	94.89	
		Range	88.22	
		Interquartile Range	35.22	
		Skewness	.821	.491
		Kurtosis	.457	.953

7. Hasil Uji Kolmogorov-smirnov Kadar Vitamin D serum One-Sample Kolmogorov-Smirnov Test

	VitaminD
--	----------

N	33
Normal Parameters ^{a, b}	
Mean	24.4121
Std. Deviation	5.68330
Most Extreme Differences	
Absolute	.147
Positive	.110
Negative	-.147
Kolmogorov-Smirnov Z	.844
Asymp. Sig. (2-tailed)	.474

a. Test distribution is Normal.

b. Calculated from data.

8. Hasil Uji Levene dan T-test Independen Kadar Vitamin D Serum

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differ- ence	Std. Error Differ- ence	Lower	Upper
Vita- minD	Equal variances assumed	2.595	.117	4.96 9	31	.000	7.90455	1.59093	4.65982	11.1492 7
	Equal variances not assumed			5.60 3	27.43 3	.000	7.90455	1.41073	5.01211	10.7969 8

9. Hasil Uji Kolmogorov-smirnov Jumlah LDGs

One-Sample Kolmogorov-Smirnov Test

		LDGs
N		33
Normal Parameters ^{a,b}	Mean	31.0888
	Std. Deviation	22.13598
Most Extreme Differences	Absolute	.143
	Positive	.143
	Negative	-.095
Kolmogorov-Smirnov Z		.820
Asymp. Sig. (2-tailed)		.513

a. Test distribution is Normal.

b. Calculated from data.

10. Hasil Uji Levene dan T-test Independen Jumlah LDGs

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
LDGs	Equal variances assumed	5.194	.030	-3.418	31	.002	-24.19182	7.07778	-38.62705	-9.75659
	Equal variances not assumed			-4.330	30.695	.000	-24.19182	5.58690	-35.59096	-12.79268

11. Korelasi Kadar Vitamin D Serum dan Jumlah LDGs Pada Pasien LES

Descriptive Statistics

	Mean	Std. Deviation	N
VitaminD	21.7773	4.72016	22
LDGs	39.1527	22.29741	22

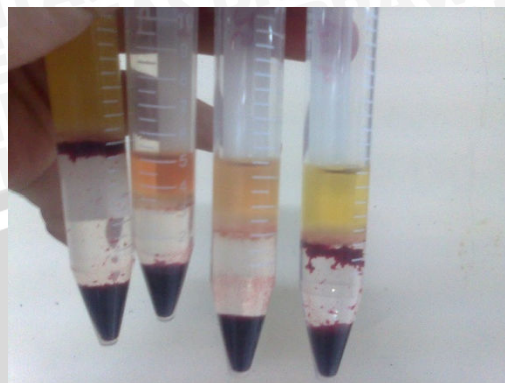
Correlations

		VitaminD	LDGs
VitaminD	Pearson Correlation	1	-.187
	Sig. (2-tailed)		.406
	N	22	22
LDGs	Pearson Correlation	-.187	1
	Sig. (2-tailed)	.406	
	N	22	22

Lampiran 7. Dokumentasi



Proses isolasi PBMC



Whole blood setelah disentrifugasi



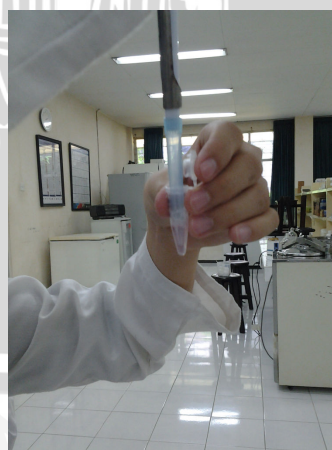
Flow cytometer



Proses pembacaan LDGs dengan Flow cytometry



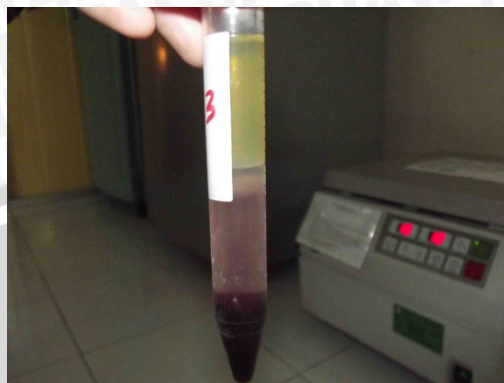
Proses sentrifugasi



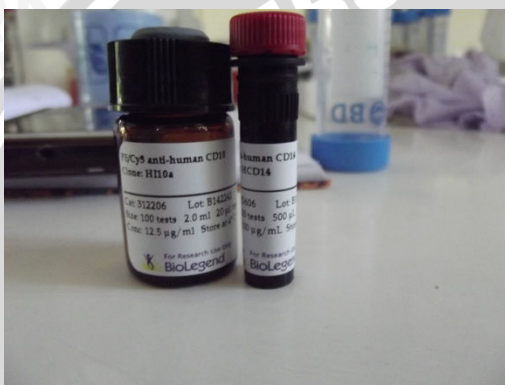
Proses pewarnaan *pellet* sebelum LDGs dihitung



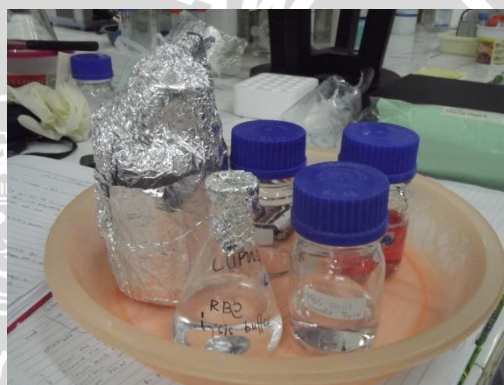
Proses pengambilan sampel darah



Cincin PBMC



**Marker PE/Cy5 anti-human CD10 dan
PE anti human CD14**



Bahan untuk isolasi PBMC