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LAMPIRAN-LAMPIRAN

Lampiran I

LEMBAR PENJELASAN SEBELUM TINDAKAN

NASKAH PENJELASAN UNTUK RESPONDEN

Assalamu'alaikum warahmatullahi wabarakatuh

Salam sejahtera teriring doa semoga segala aktivitas keseharian kita mendapat rahmat dan ridho Allah SWT. Saya dr. Yose Waluyo, Sp.KFR yang akan melakukan penelitian tentang **KADAR *CARTILAGE OLIGOMERIC MATRIX PROTEIN (COMP)* DAN *URINARY COLLAGEN TYPE 2-C TELOPEPTIDE* (*uCTX-II)* SETELAH INTERVENSI PROLOTERAPI DAN *OUTCOME* FUNGSIONAL PADA PARTISIPAN DENGAN OSTEOARTRITIS GENU**, kami bermaksud ingin mengikutsertakan anda sebagai partisipan pada penelitian ini.

Penelitian ini bertujuan untuk mengetahui efek pemberian larutan glukosa pada sendi partisipan penderita osteoartritis lutut khususnya di Klinik Cerebellum, Makassar. Penelitian ini diharapkan dapat memberikan rekomendasi tentang terapi utama penyakit osteoartritis.

Adapun prosedur yang akan dilaksanakan pada penelitian ini yaitu :

1. Wawancara dan pemeriksaan fisik

   Pertanyaan yang akan diajukan saat wawancara adalah identitas partisipan, derajat keparahan gejala yang dialami terkait dengan OA, skor fungsional dan riwayat pengobatan. Pemeriksaan fisik dan penunjang yang dilakukan berupa berat dan tinggi badan serta keadaan lokalis lutut. Pemeriksaan skor fungsional akan diulangi di

hari ke-78 pada intervensi proloterapi dan hari ke-50 pada intervensi sodium hyaluronan.

2. Pemeriksaan radiologi

Foto lutut dilakukan untuk mendiagnosis dan melihat perkembangan penyakit osteoartritis pada partisipan. Pemeriksaan foto lutut akan dilakukan pada kunjungan pertama.

3. Pengambilan sampel darah

Pengambilan sampel darah dilakukan untuk mengetahui kadar COMP partisipan. Prosedur pengambilan darah disesuaikan dengan prosedur operasional yang terstandarisasi (SOP). Pengambilan darah akan dilakukan pada hari ke-1 dan ke-78 untuk partisipan dengan intervensi proloterapi. Sedangkan partisipan dengan intervensi sodium hyaluronan, pengambilan darah dilakukan pada hari ke-1 dan ke-50.

4. Pengambilan sampel urin

Pengambilan sampel urin dilakukan untuk mengetahui kadar uCTX-II partisipan. Prosedur pengambilan sampel urin disesuaikan dengan prosedur operasional yang terstandarisasi (SOP). Pengambilan urin akan dilakukan pada hari ke-1 dan ke-78 untuk partisipan dengan intervensi proloterapi. Sedangkan partisipan dengan intervensi sodium hyaluronan, pengambilan urin dilakukan pada hari ke-1 dan ke-50.

5. Pemberian intervensi

Pemberian proloterapi akan dilakukan dengan cara menyuntikkan larutan glukosa pada sendi lutut partisipan yang disesuaikan dengan SOP. Pemberian proloterapi dilakukan pada hari ke-1, ke-29, dan ke-57.

Pemberian sodium hyaluronan akan dilakukan dengan cara menyuntikkan Adant® dispo pada sendi lutut partisipan yang disesuaikan dengan SOP. Pemberian Adant® dispo dilakukan tiap minggu selama 5 minggu.

Biaya penelitian ini akan ditanggung oleh dokter yang melakukan penelitian dan tidak dibebankan pada anda. Kami menjamin kerahasiaan semua data pada penelitian ini. Data penelitian ini akan dikumpulkan dan disimpan tanpa menyebutkan nama anda dan disimpan dalam arsip tertulis atau elektronik yang hanya dapat dilihat oleh penliti dan tim peneliti dari Komisi Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Hasanuddin. Semua hasil pemeriksaan yang terkait dengan penelitian ini akan disampaikan kepada anda secara terbuka. Hasil penelitian ini nantinya akan dipublikasikan pada publikasi ilmiah, namun kami akan merahasiakan kerahasiaan identitas anda.

Kami sangat mengharapkan partisipasi anda, dengan bersedia untuk ikut dalam penelitian ini secara sukarela. Bila anda bersedia, kami berharap anda dapat memberikan persetujuan dalam bentuk lisan dan tertulis.

Bila anda merasa masih ada yang belum jelas atau belum dimengerti dengan baik, anda dapat menanyakan atau minta penjelasan pada saya.

Identitas Peneliti : dr. Yose Waluyo, Sp.KFR

Alamat :

DISETUJUI OLEH KOMISI ETIK PENELITIAN KESEHATAN FAK. KEDOKTERAN UNHAS

Tgl. ……..…

Lampiran II

LEMBAR PERSETUJUAN RESPONDEN

SURAT PERSETUJUAN MENGIKUTI PENELITIAN

Yang bertandatangan di bawah ini

Nama : .....

Umur : .....

Alamat : .....

Pekerjaan : .....

Dengan ini menyatakan bahwa setelah saya mendapatkan penjelasan, telah diberi kesempatan bertanya, dan pertanyaan saya telah terjawab sepenuhnya dengan jelas serta saya telah memahami sepenuhnya maksud dan tujuan penelitian yang berjudul:

"KADAR *CARTILAGE OLIGOMERIC MATRIX PROTEIN (COMP)* DAN *URINARY COLLAGEN TYPE 2-C TELOPEPTIDE* (*uCTX-II)* SETELAH INTERVENSI PROLOTERAPI DAN *OUTCOME* FUNGSIONAL PADA PARTISIPAN DENGAN OSTEOARTRITIS GENU"

Maka saya menyatakan **SETUJU** untuk ikut serta dalam penelitian ini, bersedia dan tidak keberatan mematuhi semua ketentuan yang berlaku dalam penelitian ini, dan memberikan keterangan yang sebenarnya.

Demikian pernyataan ini saya buat dalam keadaan sadar dan tanpa paksaan untuk digunakan sebagaimana mestinya.

	NAMA	**TANDA TANGAN**	**TANGGAL**
Klien	.....	.....	.....
Saksi	..... .	.....	.....

Identitas Peneliti
Nama : dr. Yose Waluyo, Sp.KFR
Alamat :
No. HP :

Penanggung Jawab Medik
Nama :
Alamat :
No. HP :

Lampiran III

SURAT PERSETUJUAN/PENOLAKAN MEDIS KHUSUS

Saya yang bertanda tangan di bawah ini :

Nama :

Jenis Kelamin(L/P) :

Umur/Tgl Lahir :

Alamat :

Telp :

Menyatakan dengan sesungguhnya dari saya sendiri/ *sebagai orang tua/ *suami/ *istri/ *anak/ *wali dari:

Nama :

Jenis Kelamin(L/P) :

Umur/Tgl Lahir :

Alamat :

Telp :

Dengan ini menyatakan SETUJU/MENOLAK untuk dilakukan Tindakan Medis berupa…….

Dari penjelasan yang diberikan, telah saya mengerti segala hal yang berhubungan dengan penyakit tersebut, serta tindakan medis yang akan dilakukan dan kemungkinan pasca tindakan yang dapat terjadi sesuai penjelasan yang diberikan.

Makassar,… 2019

Dokter penanggung jawab Yang membuat pernyataan,

(……) (……..)

*Coret yang tidak perlu

Lampiran IV

KUESIONER PENELITIAN

KADAR *CARTILAGE OLIGOMERIC MATRIX PROTEIN (COMP)* DAN *URINARY COLLAGEN TYPE 2-C TELOPEPTIDE* (*uCTX-II)* SETELAH INTERVENSI PROLOTERAPI DAN *OUTCOME* FUNGSIONAL PADA PARTISIPAN DENGAN OSTEOARTRITIS GENU

Tanggal pengambilan data : ……../..... / 2019

A. IDENTITAS RESPONDEN

1. Nama responden :.....
2. Tanggal lahir :.....
3. Nomor rekam medik :.....
4. Alamat lengkap :.....
5. Nomor telepon :.....
6. Paritas : G P A
7. Agama : Islam / Kristen / Katolik / Budha / Hindu
8. Pendidikan : Tidak sekolah / SD / SMP / SMA / PT
9. Pekerjaan : Bekerja / tidak bekerja
10. Jenis kontrasepsi : Implant / DMPA

B. RIWAYAT RESPONDEN

1) Lama menderita OA : tahun
2) Bukti klinis OA : Hasil foto Ro/ hasil laboratorium
3) Keluhan yang dialami selama OA :.....
4) Skor VAS :.....
5) Riwayat penyakit lain yang pernah diderita:.....
6) Riwayat perawatan di rumah sakit :.....
7) Riwayat terapi terkait OA :.....
8) Riwayat mengkonsumsi obat-obatan rutin:.....
9) Perilaku kesehatan : merokok/alkohol
   Pola diet
   Aktivitas fisik
   Pola istirahat

C. HASIL PEMERIKSAAN FISIK DAN PENUNJANG

1) Berat Badan :.....
2) Tinggi Badan :.....
3) Indeks Massa Tubuh :.....
4) Kadar Comp Awal :.....
5) Kadar Uctx Awal :.....
6) Pemeriksaan laboratorium lainnya :.....
7) Hasil X-Ray Genu :.....

PEMERIKSA

(_____)

KUESIONER WOMAC

Nyeri	1. Berjalan di permukaan yang rata	0	1	2	3	4
	2. Menaiki tangga	0	1	2	3	4
	3. Pada malam hari	0	1	2	3	4
	4. Saat istirahat	0	1	2	3	4
	5. Berdiri tegak	0	1	2	3	4
Kekakuan	1. Kekakuan di pagi hari	0	1	2	3	4
	2. Kekakuan yang terjadi dalam sehari	0	1	2	3	4
Fungsi fisik	1. Menuruni tangga	0	1	2	3	4
	2. Menaiki tangga	0	1	2	3	4
	3. Berdiri dari duduk	0	1	2	3	4
	4. Berdiri	0	1	2	3	4
	5. membungkuk menyentuh lantai	0	1	2	3	4
	6. Berjalan di tempat yang datar	0	1	2	3	4
	7. naik atau turun dari kendaraan	0	1	2	3	4
	8. Berbelanja	0	1	2	3	4
	9. memakai kaos kaki	0	1	2	3	4
	10. bangun dari tidur	0	1	2	3	4
	11. melepas kaos kaki	0	1	2	3	4
	12. berbaring di tempat tidur	0	1	2	3	4
	13. Masuk/keluar kamar mandi	0	1	2	3	4
	14. Duduk	0	1	2	3	4
	15. Buang air di toilet	0	1	2	3	4
	16. Melakukan tugas rumah tangga ringan	0	1	2	3	4
	17. Melakukan tugas rumah tangga berat	0	1	2	3	4

0=tidak ada, 1=ringan, 2=sedang, 3=berat, 4=sangat berat

Interpretasi Nilai WOMAC

Jenis Pemeriksaan	**Total Skor**	**Keterangan**
Nyeri	0	Minimum
	20	Maksimum
Kekakuan	0	Minimum
	8	Maksimum
Fungsi Fisik	0	Minimum
	68	Maksimum
Total	96	Maksimum Skor

Interpretasi Total Skor WOMAC

Total Skor WOMAC	Interpretasi
0-24	Ringan
25-48	Sedang
49-72	Berat
73-96	Sangat Berat

Lampiran V

TEKNIK PENGAMBILAN DARAH VENA

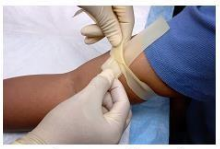
Venipuncture

For use with vacutainer tubes

Always use universal safety precautions.

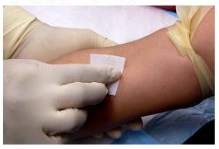
1. **Collect supplies.**

2. **Label tube with the client identification number.**



3. **Put tourniquet on client about 3-4" above venipuncture site.**

4. **Have client form a fist so veins are more prominent.**

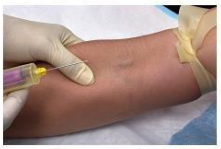


5. **After palpating the path of the vein, clean the venipuncture site with alcohol using a circular motion. Allow the area to dry.**

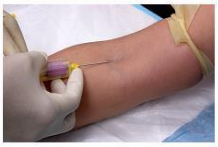
6. **Assemble needle and vacuum tube holder.**

7. **Insert the collection tube into the holder until the tube reaches the needle.**

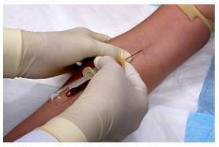
8. **Remove cap from needle.**



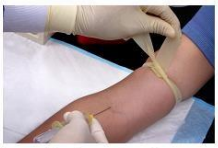
9. **Use your thumb to draw skin tight about 1- 2" below the venipuncture site. Hold skin tight through Step 10**



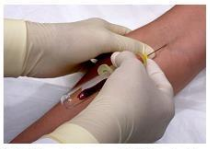
10. **Insert the needle, bevel side up, into the vein.**



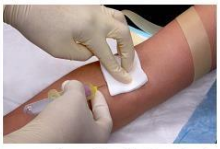
11. **Push the vacutainer tube completely onto the needle. Blood should begin to flow into the tube.**



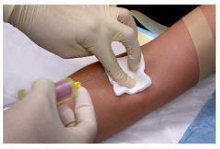
12. **Release the tourniquet.**



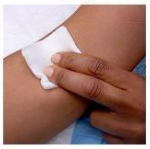
13. **Fill the tube until it is full or until vacuum is exhausted.**



14. **After opening client's hand, place dry gauze over the venipuncture site.**



15. **Apply mild pressure to the pad and slowly remove the needle.**



16. **Apply bandage or continue applying mild pressure until bleeding has stopped.**

17. **Properly dispose of all contaminated supplies.**

WHO

Use of trade names and commercial sources is for identification only and does not imply endorsement by WHO, the Public Health Service, or by the U.S. Department of Health and Human Services (2005).

CDC

Lampiran VI

TEKNIK MOBILISASI SAMPEL

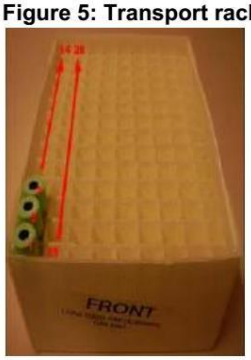
10.12.6: Waste disposal
The laboratory area is kept clean, and documents are maintained for each cleaning routine undertaken. All hazardous waste bins are emptied and the secured bags taken to the hazardous waste collection bin. Documents are maintained describing whether they are sharps, bags or urine containers. The documents describing the clinical waste totals are sent to the co-ordinating centre support team on the last working day of each month.

11. Transporting of samples

11.1: This section details the correct method of packing the blood, urine and saliva samples so they reach the UK Biobank laboratory undamaged and within acceptable temperature limits. Also detailed are the correct method for dealing with courier pick ups, any delays in pick up and the return of sample boxes from UK Biobank Coordinating Centre.

11.2: Preparing samples for transport
At the beginning of each day the lab processing staff member prepares 12 transport racks: 8 for the blood and urine tubes and 4 for the saliva tubes. These are stored in the Assessment Centre holding fridge, except for the ACD blood sample tubes – yellow cap. During the day the sample tubes are loaded into the specific transport rack from the first participant to the last participant (Figure 5). The ACD blood sample tubes are kept AND transported at room temperature in a rack.

Figure 5: Transport rack



11.3: The EDTA 4ml (small) tube (purple cap) and the ACD tubes have a smaller inner rack within the transport rack to ensure the smaller tubes are transported safely.

11.4: 45 minutes prior to the courier arriving, lids are placed on the racks and each rack is individually placed inside a plastic bag. Three sheets of absorbent paper are placed inside the bag. The plastic bag is sealed with a cable tie (figure 6).

Figure 6: Sealing racks for transport

11.5: On the two short sides of the transport box are placed a cool pack and a spacer (see figure 7). The cool packs are kept in the freezer for at least 24 hours before use and are taken out 30 minutes before being used each day.

Figure 7: Mediporter transport box with cool packs

11.6: The bagged racks (except the ACD tubes) are placed into the large transport box (figure 8).

Figure 8: Racks in Mediporter

11.7: A third spacer is placed on top once the sample racks are all loaded and the

third cool pack is placed on top of the spacer (figure 9).

Figure 9: Mediporter with cool pack

11.8: The polystyrene lid is placed on top of the box. The lid of the plastic outer box is closed. Every Tuesday a datalogger is placed in both the large transport box and the Mediporter **(Section 13)**.

11.9: The ACD samples are placed inside a Mediporter without a cool pack

11.10: The lids of both transport boxes are closed and sealed with plain cable ties (figure 10) and they are moved to the designated pick up area.

Figure 10: Sealing the transport boxes

12. Courier collection

12.1: All Assessment Centres use TNT to return the sample transport boxes to the Co-ordinating Centre Laboratory. Collections from all Assessment Centres occur at 8:30pm, Monday to Saturday (excluding Bank Holidays).

12.2: The sample transport boxes are packed (Section 11) and placed ready for collection in a designated area. TNT provide all UK Biobank Assessment Centres with pre-addressed consignment notes. Assessment Centre Staff complete a TNT Consignment note by inserting the date, and then attaching a barcode from the consignment note on to each individual transport box, prior to collection. Transport boxes are made ready for collection before 8:30pm.

Lampiran VII

PROTOKOL PEMERIKSAAN COMP

Assay Procedure

1. Prepare all reagents, standard solutions and samples as instructed. Bring all reagents to room temperature before use. The assay is performed at room temperature.
2. Determine the number of strips required for the assay. Insert the strips in the frames for use. The unused strips should be stored at 2-8°C.
3. Add 50μl standard to standard well. **Note**: Don't add antibody to standard well because the standard solution contains biotinylated antibody.
4. Add 40μl sample to sample wells and then add 10μl anti-COMP antibody to sample wells, then add 50μl streptavidin-HRP to sample wells and standard wells (Not blank control well). Mix well. Cover the plate with a sealer. Incubate 60 minutes at 37°C.
5. Remove the sealer and wash the plate 5 times with wash buffer. Soak wells with at least 0.35 ml wash buffer for 30 seconds to 1 minute for each wash. For automated washing, aspirate all wells and wash 5 times with wash buffer, overfilling wells with wash buffer. Blot the plate onto paper towels or other absorbent material.
6. Add 50μl substrate solution A to each well and then add 50μl substrate solution B to each well. Incubate plate covered with a new sealer for 10 minutes at 37°C in the dark.
7. Add 50μl Stop Solution to each well, the blue color will change into yellow immediately.
8. Determine the optical density (OD value) of each well immediately using a microplate reader set to 450 nm within 10 minuets after adding the stop solution.

Lampiran VIII

PROTOKOL PEMERIKSAAN uCTX-II

Assay Procedure

1. Prepare all reagents, standard solutions and samples as instructed. Bring all reagents to room temperature before use. The assay is performed at room temperature.
2. Determine the number of strips required for the assay. Insert the strips in the frames for use. The unused strips should be stored at 2-8°C.
3. Add 50μl standard to standard well. **Note**: Don't add antibody to standard well because the standard solution contains biotinylated antibody.
4. Add 40μl sample to sample wells and then add 10μl anti-CTX-II antibody to sample wells, then add 50μl streptavidin-HRP to sample wells and standard wells (Not blank control well). Mix well. Cover the plate with a sealer. Incubate 60 minutes at 37°C.
5. Remove the sealer and wash the plate 5 times with wash buffer. Soak wells with at least 0.35 ml wash buffer for 30 seconds to 1 minute for each wash. For automated washing, aspirate all wells and wash 5 times with wash buffer, overfilling wells with wash buffer. Blot the plate onto paper towels or other absorbent material.
6. Add 50μl substrate solution A to each well and then add 50μl substrate solution B to each well. Incubate plate covered with a new sealer for 10 minutes at 37°C in the dark.
7. Add 50μl Stop Solution to each well, the blue color will change into yellow immediately.
8. Determine the optical density (OD value) of each well immediately using a microplate reader set to 450 nm within 10 minuets after adding the stop solution.

LAMPIRAN IX

Tabel normalitas

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	.165	38	.011	.949	38	.080
gender	.459	38	.000	.550	38	.000
body_weight	.120	38	.183	.918	38	.008
IMT	.136	38	.074	.948	38	.075
duration	.254	38	.000	.671	38	.000
NRS0	.158	38	.018	.943	38	.054
pain_womac0	.162	38	.013	.945	38	.061
stifness_womac0	.146	38	.040	.930	38	.020
functional_womac0	.111	38	.200*	.966	38	.297
total	.095	38	.200*	.974	38	.520
Weight_bearing_pain0	.164	38	.011	.939	38	.040
sCOMP0	.301	38	.000	.644	38	.000
uCTX-II0	.131	38	.097	.947	38	.071
NRS_aft	.203	38	.000	.872	38	.000
pain_womac_aft	.156	38	.021	.889	38	.001
stifness_womac_aft	.243	38	.000	.835	38	.000
functional_womac_Aft	.141	38	.054	.930	38	.020
total_aft	.137	38	.068	.940	38	.043
weight_bearing_pain_aft	.137	38	.071	.916	38	.007
sCOMP_aft	.325	38	.000	.501	38	.000
uCTX-II_aft	.142	38	.052	.919	38	.009
NRS_1	.160	38	.015	.925	38	.014
pain_womac	.133	38	.085	.975	38	.559
stifness_womac	.182	38	.003	.947	38	.073
functional_womac	.146	38	.040	.972	38	.446
total1	.129	38	.114	.968	38	.330
weight_bearing_pain_1	.163	38	.012	.948	38	.076
sCOMP	.359	38	.000	.488	38	.000
uCTX-II	.109	38	.200*	.965	38	.283

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tabel analisa baseline comparison (DPT vs HA)

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
KL	Equal variances assumed	2.393	.129	-.750	45	.457	-.088	.117	-.324	.148
	Equal variances not assumed			-.765	44.937	.449	-.088	.115	-.320	.144
Age	Equal variances assumed	3.907	.054	.248	45	.805	.645	2.602	-4.595	5.885
	Equal variances not assumed			.237	32.478	.814	.645	2.724	-4.901	6.190
gender	Equal variances assumed	.694	.409	.421	45	.676	.055	.130	-.208	.318
	Equal variances not assumed			.418	41.459	.678	.055	.132	-.211	.321
Sex	Equal variances assumed	.694	.409	.421	45	.676	.055	.130	-.208	.318
	Equal variances not assumed			.418	41.459	.678	.055	.132	-.211	.321
body_weight	Equal variances assumed	.385	.539	1.517	42	.137	5.583	3.680	-1.844	13.010
	Equal variances not assumed			1.529	41.560	.134	5.583	3.652	-1.788	12.955
IMT	Equal variances assumed	.117	.735	1.341	36	.188	1.87977	1.40220	-.96402	4.72356
	Equal variances not assumed			1.305	29.016	.202	1.87977	1.44089	-1.06711	4.82666
duration	Equal variances assumed	1.388	.245	1.026	45	.310	1.03123	1.00508	-.99310	3.05556
	Equal variances not assumed			1.090	39.551	.282	1.03123	.94592	-.88123	2.94368
NRS0	Equal variances assumed	.002	.965	2.852	45	.007	1.370	.480	.402	2.337
	Equal variances not assumed			2.886	44.463	.006	1.370	.475	.413	2.326
pain_womac0	Equal variances assumed	.006	.937	2.536	45	.015	2.249	.887	.463	4.035
	Equal variances not assumed			2.551	43.813	.014	2.249	.882	.472	4.026
stifness_womac0	Equal variances assumed	.802	.375	.910	45	.368	.553	.608	-.671	1.777
	Equal variances not assumed			.930	44.988	.357	.553	.595	-.645	1.751
functional_womac0	Equal variances assumed	5.864	.020	2.370	45	.022	8.465	3.572	1.271	15.660
	Equal variances not assumed			2.217	27.761	.035	8.465	3.817	.642	16.288
total	Equal variances assumed	6.505	.014	2.797	45	.008	11.267	4.029	3.153	19.382
	Equal variances not assumed			2.651	30.662	.013	11.267	4.251	2.594	19.940
sCOMP0	Equal variances assumed	1.936	.171	-.931	45	.357	-676.60304	726.58022	-2140.01072	786.80464
	Equal variances not assumed			-.905	36.829	.371	-676.60304	747.47639	-2191.37129	838.16521
uCTX-II0	Equal variances assumed	.126	.724	1.516	45	.137	.17918	.11819	-.05887	.41722
	Equal variances not assumed			1.525	43.834	.134	.17918	.11748	-.05761	.41596

Tabel analisa pre-post kelompok DPT

Paired Samples Test[a]

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	NRS0 - NRS_aft	3.385	2.210	.434	2.492	4.277	7.808	25	.000
Pair 2	uCTX-II0 - uCTX-II_aft	.25538	.52755	.10346	.04230	.46847	2.468	25	.021
Pair 3	pain_womac0 - pain_womac_aft	4.115	2.930	.575	2.932	5.299	7.161	25	.000
Pair 4	stifness_womac0 - stifness_womac_aft	1.577	2.318	.455	.641	2.513	3.469	25	.002
Pair 5	functional_womac0 - functional_womac_Aft	11.231	11.129	2.183	6.735	15.726	5.145	25	.000
Pair 6	total - total_aft	16.923	13.859	2.718	11.325	22.521	6.226	25	.000

a. code = prolo

Test Statistics[a,b]

	pain_womac_aft - pain_womac0	stifness_womac_aft - stifness_womac0	functional_womac_Aft - functional_womac0	total_aft - total
Z	-4.252[c]	-2.870[c]	-3.827[c]	-4.230[c]
Asymp. Sig. (2-tailed)	.000	.004	.000	.000

a. code = prolo

b. Wilcoxon Signed Ranks Test

c. Based on positive ranks.

Test Statistics[a,b]

	sCOMP_aft - sCOMP0	uCTX-II_aft - uCTX-II0
Z	-1.486[c]	-2.146[d]
Asymp. Sig. (2-tailed)	.137	.032

a. code = prolo

b. Wilcoxon Signed Ranks Test

c. Based on negative ranks.

d. Based on positive ranks.

Tabel analisa pre-post kelompok HA

Paired Samples Test[a]

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	NRS0 - NRS_aft	1.619	1.627	.355	.878	2.360	4.560	20	.000
Pair 2	uCTX-II0 - uCTX-II_aft	-.05333	.48425	.10567	-.27376	.16709	-.505	20	.619
Pair 3	pain_womac0 - pain_womac_aft	1.714	3.770	.823	-.002	3.430	2.084	20	.050
Pair 4	stifness_womac0 - stifness_womac_aft	1.429	1.938	.423	.546	2.311	3.377	20	.003
Pair 5	functional_womac0 - functional_womac_Aft	5.810	7.574	1.653	2.362	9.257	3.515	20	.002
Pair 6	total - total_aft	8.952	9.790	2.136	4.496	13.409	4.190	20	.000

a. code = ha

Test Statistics[a,b]

	pain_womac_aft - pain_womac0	stifness_womac_aft - stifness_womac0	functional_womac_Aft - functional_womac0	total_aft - total
Z	-2.420[c]	-2.743[c]	-2.911[c]	-3.382[c]
Asymp. Sig. (2-tailed)	.016	.006	.004	.001

a. code = ha

b. Wilcoxon Signed Ranks Test

c. Based on positive ranks.

Test Statistics[a,b]

	sCOMP_aft - sCOMP0	uCTX-II_aft - uCTX-II0
Z	-1.095[c]	-.835[c]
Asymp. Sig. (2-tailed)	.274	.404

a. code = ha

b. Wilcoxon Signed Ranks Test

c. Based on negative ranks.

Tabel analisa ANCOVA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.488	5.810		1.461	.152
	NRS0	-1.108	1.041	-.147	-1.064	.293
	pain_womac0	.793	.899	.191	.882	.383
	functional_womac0	1.647	.772	1.583	2.134	.039
	total	-.893	.750	-.989	-1.190	.241
	code	.853	3.364	.032	.253	.801

a. Dependent Variable: total_aft

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.415	.763		-.543	.590
	NRS0	-.001	.137	-.002	-.011	.992
	pain_womac0	-.066	.118	-.149	-.555	.582
	functional_womac0	-.137	.101	-1.244	-1.350	.184
	total	.163	.099	1.709	1.657	.105
	code	.927	.442	.331	2.098	.042

a. Dependent Variable: NRS_aft

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.116	1.400		-.797	.430
	NRS0	-.193	.251	-.119	-.770	.445
	pain_womac0	.130	.217	.145	.600	.552
	functional_womac0	-.010	.186	-.046	-.055	.956
	total	.123	.181	.631	.678	.501
	code	1.475	.810	.259	1.820	.076

a. Dependent Variable: pain_womac_aft

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.469	.764		.613	.543
	NRS0	-.018	.137	-.023	-.131	.896
	pain_womac0	-.176	.118	-.415	-1.487	.145
	functional_womac0	-.134	.101	-1.266	-1.322	.194
	total	.162	.099	1.761	1.642	.108
	code	-.135	.442	-.050	-.306	.761

a. Dependent Variable: stifness_womac_aft

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.135	4.433		2.061	.046
	NRS0	-.896	.794	-.149	-1.129	.266
	pain_womac0	.839	.686	.253	1.222	.229
	functional_womac0	1.791	.589	2.162	3.042	.004
	total	-1.177	.572	-1.637	-2.057	.046
	code	-.487	2.567	-.023	-.190	.850

a. Dependent Variable: functional_womac_Aft

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.427	.290		-1.471	.149
	NRS0	.099	.052	.331	1.903	.064
	pain_womac0	-.045	.045	-.273	-1.001	.323
	functional_womac0	-.014	.039	-.336	-.359	.721
	total	.010	.038	.288	.275	.785
	code	.342	.168	.326	2.034	.048

a. Dependent Variable: uCTX-II

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2662.946	1403.864		1.897	.065
	NRS0	-182.965	251.488	-.136	-.728	.471
	pain_womac0	31.369	217.300	.042	.144	.886
	functional_womac0	32.286	186.451	.174	.173	.863

total	-63.450	181.289	-.393	-.350	.728
code	-357.002	812.765	-.076	-.439	.663

a. Dependent Variable: sCOMP

Tabel analisis korelasi

KELOMPOK PROLOTERAPI

Correlations[a]

		pain_womac0	functional_womac0	total	uCTX-II0
pain_womac0	Pearson Correlation	1	.693**	.782**	-.098
	Sig. (2-tailed)		.000	.000	.635
	N	26	26	26	26
functional_womac0	Pearson Correlation	.693**	1	.965**	-.012
	Sig. (2-tailed)	.000		.000	.952
	N	26	26	26	26
total	Pearson Correlation	.782**	.965**	1	-.100
	Sig. (2-tailed)	.000	.000		.626
	N	26	26	26	26
uCTX-II0	Pearson Correlation	-.098	-.012	-.100	1
	Sig. (2-tailed)	.635	.952	.626	
	N	26	26	26	26

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

a. code = prolo

Correlations[a]

			pain_womac0	stifness_womac0	functional_womac0	total	uCTX-II0
Spearman's rho	pain_womac0	Correlation Coefficient	1.000	-.325	.666**	.724**	.028
		Sig. (2-tailed)	.	.106	.000	.000	.892
		N	26	26	26	26	26
	stifness_womac0	Correlation Coefficient	-.325	1.000	-.154	-.001	-.319
		Sig. (2-tailed)	.106	.	.454	.996	.112
		N	26	26	26	26	26
	functional_womac0	Correlation Coefficient	.666**	-.154	1.000	.955**	.062
		Sig. (2-tailed)	.000	.454	.	.000	.763
		N	26	26	26	26	26
	total	Correlation Coefficient	.724**	-.001	.955**	1.000	-.039
		Sig. (2-tailed)	.000	.996	.000	.	.850
		N	26	26	26	26	26
	uCTX-II0	Correlation Coefficient	.028	-.319	.062	-.039	1.000
		Sig. (2-tailed)	.892	.112	.763	.850	.
		N	26	26	26	26	26

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

a. code = prolo

Correlations[a]

			pain_womac0	stifness_womac0	functional_womac0	total	sCOMP0
Spearman's rho	pain_womac0	Correlation Coefficient	1.000	-.325	.666**	.724**	.136
		Sig. (2-tailed)	.	.106	.000	.000	.508
		N	26	26	26	26	26
	stifness_womac0	Correlation Coefficient	-.325	1.000	-.154	-.001	-.061
		Sig. (2-tailed)	.106	.	.454	.996	.769
		N	26	26	26	26	26
	functional_womac0	Correlation Coefficient	.666**	-.154	1.000	.955**	.113
		Sig. (2-tailed)	.000	.454	.	.000	.581
		N	26	26	26	26	26
	total	Correlation Coefficient	.724**	-.001	.955**	1.000	.100
		Sig. (2-tailed)	.000	.996	.000	.	.627
		N	26	26	26	26	26
	sCOMP0	Correlation Coefficient	.136	-.061	.113	.100	1.000
		Sig. (2-tailed)	.508	.769	.581	.627	.
		N	26	26	26	26	26

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

a. code = prolo

Correlations[a]

		pain_womac_aft	functional_womac_Aft	total_aft	uCTX-II_aft
pain_womac_aft	Pearson Correlation	1	.555**	.751**	-.070
	Sig. (2-tailed)		.003	.000	.734
	N	26	26	26	26
functional_womac_Aft	Pearson Correlation	.555**	1	.961**	-.032
	Sig. (2-tailed)	.003		.000	.876
	N	26	26	26	26
total_aft	Pearson Correlation	.751**	.961**	1	-.028
	Sig. (2-tailed)	.000	.000		.892
	N	26	26	26	26
uCTX-II_aft	Pearson Correlation	-.070	-.032	-.028	1
	Sig. (2-tailed)	.734	.876	.892	
	N	26	26	26	26

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

a. code = prolo

Correlations[a]

			stifness_womac0	uCTX-II0	stifness_womac_aft	uCTX-II_aft	stifness_womac	uCTX-II
Spearman's rho	stifness_womac0	Correlation Coefficient	1.000	-.319	.329	.093	-.770**	.362
		Sig. (2-tailed)	.	.112	.101	.650	.000	.069
		N	26	26	26	26	26	26
	uCTX-II0	Correlation Coefficient	-.319	1.000	-.105	.020	.199	-.745**
		Sig. (2-tailed)	.112	.	.610	.921	.331	.000
		N	26	26	26	26	26	26
	stifness_womac_aft	Correlation Coefficient	.329	-.105	1.000	.082	.258	.161
		Sig. (2-tailed)	.101	.610	.	.690	.203	.431
		N	26	26	26	26	26	26
	uCTX-II_aft	Correlation Coefficient	.093	.020	.082	1.000	-.063	.601**
		Sig. (2-tailed)	.650	.921	.690	.	.760	.001
		N	26	26	26	26	26	26
	stifness_womac	Correlation Coefficient	-.770**	.199	.258	-.063	1.000	-.244
		Sig. (2-tailed)	.000	.331	.203	.760	.	.231
		N	26	26	26	26	26	26
	uCTX-II	Correlation Coefficient	.362	-.745**	.161	.601**	-.244	1.000
		Sig. (2-tailed)	.069	.000	.431	.001	.231	.
		N	26	26	26	26	26	26

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

a. code = prolo

Correlations[a]

			pain_womac_aft	stifness_womac_aft	functional_womac_Aft	total_aft	sCOMP_aft
Spearman's rho	pain_womac_aft	Correlation Coefficient	1.000	.694**	.540**	.730**	-.258
		Sig. (2-tailed)	.	.000	.004	.000	.203
		N	26	26	26	26	26
	stifness_womac_aft	Correlation Coefficient	.694**	1.000	.384	.553**	-.371
		Sig. (2-tailed)	.000	.	.053	.003	.062
		N	26	26	26	26	26
	functional_womac_Aft	Correlation Coefficient	.540**	.384	1.000	.956**	-.323
		Sig. (2-tailed)	.004	.053	.	.000	.108
		N	26	26	26	26	26
	total_aft	Correlation Coefficient	.730**	.553**	.956**	1.000	-.372
		Sig. (2-tailed)	.000	.003	.000	.	.061
		N	26	26	26	26	26
	sCOMP_aft	Correlation Coefficient	-.258	-.371	-.323	-.372	1.000
		Sig. (2-tailed)	.203	.062	.108	.061	.
		N	26	26	26	26	26

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

a. code = prolo

Correlations[a]

		pain_womac	functional_womac	total1	uCTX-II
pain_womac	Pearson Correlation	1	.566**	.678**	.175
	Sig. (2-tailed)		.003	.000	.392
	N	26	26	26	26
functional_womac	Pearson Correlation	.566**	1	.976**	-.071
	Sig. (2-tailed)	.003		.000	.729
	N	26	26	26	26
total1	Pearson Correlation	.678**	.976**	1	-.062
	Sig. (2-tailed)	.000	.000		.765
	N	26	26	26	26
uCTX-II	Pearson Correlation	.175	-.071	-.062	1
	Sig. (2-tailed)	.392	.729	.765	
	N	26	26	26	26

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

a. code = prolo

Correlations[a]

		stifness_womac	uCTX-II
stifness_womac	Pearson Correlation	1	-.247
	Sig. (2-tailed)		.223
	N	26	26
uCTX-II	Pearson Correlation	-.247	1
	Sig. (2-tailed)	.223	
	N	26	26

a. code = prolo

Correlations[a]

			pain_womac	stifness_womac	functional_womac	total1	sCOMP
Spearman's rho	pain_womac	Correlation Coefficient	1.000	.081	.515**	.615**	-.139
		Sig. (2-tailed)	.	.693	.007	.001	.498
		N	26	26	26	26	26
	stifness_womac	Correlation Coefficient	.081	1.000	.378	.530**	.061
		Sig. (2-tailed)	.693	.	.057	.005	.766
		N	26	26	26	26	26
	functional_womac	Correlation Coefficient	.515**	.378	1.000	.954**	-.046
		Sig. (2-tailed)	.007	.057	.	.000	.822
		N	26	26	26	26	26
	total1	Correlation Coefficient	.615**	.530**	.954**	1.000	-.044
		Sig. (2-tailed)	.001	.005	.000	.	.829
		N	26	26	26	26	26
	sCOMP	Correlation Coefficient	-.139	.061	-.046	-.044	1.000
		Sig. (2-tailed)	.498	.766	.822	.829	.
		N	26	26	26	26	26

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

a. code = prolo

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Correlations[a]

			pain_womac0	stifness_womac0	functional_womac0	total	uCTX-II0
Spearman's rho	pain_womac0	Correlation Coefficient	1.000	.593**	.418	.482*	-.187
		Sig. (2-tailed)	.	.005	.059	.027	.417
		N	21	21	21	21	21
	stifness_womac0	Correlation Coefficient	.593**	1.000	.490*	.534*	.162
		Sig. (2-tailed)	.005	.	.024	.013	.484
		N	21	21	21	21	21
	functional_womac0	Correlation Coefficient	.418	.490*	1.000	.984**	.152
		Sig. (2-tailed)	.059	.024	.	.000	.510
		N	21	21	21	21	21
	total	Correlation Coefficient	.482*	.534*	.984**	1.000	.089
		Sig. (2-tailed)	.027	.013	.000	.	.703
		N	21	21	21	21	21
	uCTX-II0	Correlation Coefficient	-.187	.162	.152	.089	1.000
		Sig. (2-tailed)	.417	.484	.510	.703	.
		N	21	21	21	21	21

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

*. Correlation is significant at the 0.05 level (2-tailed).

a. code = ha

Correlations[a]

			pain_womac0	stifness_womac0	functional_womac0	total	sCOMP0
Spearman's rho	pain_womac0	Correlation Coefficient	1.000	.593**	.418	.482*	-.193
		Sig. (2-tailed)	.	.005	.059	.027	.401
		N	21	21	21	21	21
	stifness_womac0	Correlation Coefficient	.593**	1.000	.490*	.534*	-.456*
		Sig. (2-tailed)	.005	.	.024	.013	.038
		N	21	21	21	21	21
	functional_womac0	Correlation Coefficient	.418	.490*	1.000	.984**	-.346
		Sig. (2-tailed)	.059	.024	.	.000	.124
		N	21	21	21	21	21
	total	Correlation Coefficient	.482*	.534*	.984**	1.000	-.325
		Sig. (2-tailed)	.027	.013	.000	.	.151
		N	21	21	21	21	21
	sCOMP0	Correlation Coefficient	-.193	-.456*	-.346	-.325	1.000
		Sig. (2-tailed)	.401	.038	.124	.151	.
		N	21	21	21	21	21

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

*. Correlation is significant at the 0.05 level (2-tailed).

a. code = ha

Correlations[a]

		pain_womac_aft	functional_womac_Aft	total_aft	uCTX-II_aft
pain_womac_aft	Pearson Correlation	1	.763**	.846**	-.339
	Sig. (2-tailed)		.000	.000	.133
	N	21	21	21	21
functional_womac_Aft	Pearson Correlation	.763**	1	.987**	-.111
	Sig. (2-tailed)	.000		.000	.631
	N	21	21	21	21
total_aft	Pearson Correlation	.846**	.987**	1	-.172
	Sig. (2-tailed)	.000	.000		.455
	N	21	21	21	21
uCTX-II_aft	Pearson Correlation	-.339	-.111	-.172	1
	Sig. (2-tailed)	.133	.631	.455	
	N	21	21	21	21

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

a. code = ha

Correlations[a]

			stifness_womac0	uCTX-II0	stifness_womac_aft	uCTX-II_aft	stifness_womac	uCTX-II
Spearman's rho	stifness_womac0	Correlation Coefficient	1.000	.162	.120	-.375	-.829**	-.264
		Sig. (2-tailed)	.	.484	.604	.094	.000	.247
		N	21	21	21	21	21	21
	uCTX-II0	Correlation Coefficient	.162	1.000	-.003	.224	-.122	-.426
		Sig. (2-tailed)	.484	.	.989	.328	.600	.054
		N	21	21	21	21	21	21
	stifness_womac_aft	Correlation Coefficient	.120	-.003	1.000	-.132	.387	-.030
		Sig. (2-tailed)	.604	.989	.	.569	.083	.897
		N	21	21	21	21	21	21
	uCTX-II_aft	Correlation Coefficient	-.375	.224	-.132	1.000	.253	.718**
		Sig. (2-tailed)	.094	.328	.569	.	.269	.000
		N	21	21	21	21	21	21
	stifness_womac	Correlation Coefficient	-.829**	-.122	.387	.253	1.000	.192
		Sig. (2-tailed)	.000	.600	.083	.269	.	.403
		N	21	21	21	21	21	21
	uCTX-II	Correlation Coefficient	-.264	-.426	-.030	.718**	.192	1.000
		Sig. (2-tailed)	.247	.054	.897	.000	.403	.
		N	21	21	21	21	21	21

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

a. code = ha

Correlations[a]

			pain_womac_aft	stifness_womac_aft	functional_womac_Aft	total_aft	sCOMP_aft
Spearman's rho	pain_womac_aft	Correlation Coefficient	1.000	.482*	.739**	.858**	.058
		Sig. (2-tailed)	.	.027	.000	.000	.802
		N	21	21	21	21	21
	stifness_womac_aft	Correlation Coefficient	.482*	1.000	.623**	.658**	-.258
		Sig. (2-tailed)	.027	.	.003	.001	.258
		N	21	21	21	21	21
	functional_womac_Aft	Correlation Coefficient	.739**	.623**	1.000	.972**	-.230
		Sig. (2-tailed)	.000	.003	.	.000	.317
		N	21	21	21	21	21
	total_aft	Correlation Coefficient	.858**	.658**	.972**	1.000	-.140
		Sig. (2-tailed)	.000	.001	.000	.	.544
		N	21	21	21	21	21
	sCOMP_aft	Correlation Coefficient	.058	-.258	-.230	-.140	1.000
		Sig. (2-tailed)	.802	.258	.317	.544	.
		N	21	21	21	21	21

*. Correlation is significant at the 0.05 level (2-tailed).

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

a. code = ha

Correlations[a]

		pain_womac	functional_womac	total1	uCTX-II
pain_womac	Pearson Correlation	1	.014	.475*	-.032
	Sig. (2-tailed)		.953	.030	.890
	N	21	21	21	21
functional_womac	Pearson Correlation	.014	1	.872**	.272
	Sig. (2-tailed)	.953		.000	.232
	N	21	21	21	21
total1	Pearson Correlation	.475*	.872**	1	.256
	Sig. (2-tailed)	.030	.000		.263
	N	21	21	21	21
uCTX-II	Pearson Correlation	-.032	.272	.256	1
	Sig. (2-tailed)	.890	.232	.263	
	N	21	21	21	21

*. Correlation is significant at the 0.05 level (2-tailed).

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

a. code = ha

Correlations[a]

		stifness_womac	uCTX-II
stifness_womac	Pearson Correlation	1	.290
	Sig. (2-tailed)		.203
	N	21	21
uCTX-II	Pearson Correlation	.290	1
	Sig. (2-tailed)	.203	
	N	21	21

a. code = ha

Correlations[a]

			pain_womac	stifness_womac	functional_womac	total1	sCOMP
Spearman's rho	pain_womac	Correlation Coefficient	1.000	.253	.231	.513*	-.159
		Sig. (2-tailed)	.	.268	.313	.018	.492
		N	21	21	21	21	21
	stifness_womac	Correlation Coefficient	.253	1.000	.587**	.772**	-.135
		Sig. (2-tailed)	.268	.	.005	.000	.560
		N	21	21	21	21	21
	functional_womac	Correlation Coefficient	.231	.587**	1.000	.893**	-.368
		Sig. (2-tailed)	.313	.005	.	.000	.101
		N	21	21	21	21	21
	total1	Correlation Coefficient	.513*	.772**	.893**	1.000	-.280
		Sig. (2-tailed)	.018	.000	.000	.	.219
		N	21	21	21	21	21
	sCOMP	Correlation Coefficient	-.159	-.135	-.368	-.280	1.000
		Sig. (2-tailed)	.492	.560	.101	.219	.
		N	21	21	21	21	21

*. Correlation is significant at the 0.05 level (2-tailed).

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

a. code = ha

LAMPIRAN X

BIODATA PENULIS

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Agama / *Religion*	: Islam
Kegemaran/ *hobby*	: Memasak

RIWAYAT KELUARGA

Nama Ayah	: Djana Waluyo
Nama Ibu	: Mismar Marah
Nama Istri	: Vidya Rezkiyani
Nama Anak	: Muhammad Rakha Hugo Waluyo Bianca Alisyaa Waluyo

RIWAYAT PENDIDIKAN DAN PELATIHAN

- Musculoskeletal in PMR, 16 Maret - 12 April 2018, Rehabilitation Medicine Department, Hiroshima University Hospital, Hiroshima, Japan.
- Konferensi dan Workshop : "Prolotherapy & Neural Therapy Conference", 3 – 7 April 2019, Austin, USA. Diselenggarakan oleh The American Osteopathic Association of Prolotherapy Regenerative Medicine (AOAPRM)
- Workshop: "Injection Therapies for Pain including Prolotherapy, Trigger Points and Perineural Injection Therapy", di Adelaide, Australia, 29 - 31 Maret 2019.
- Workshop: USG MUST-1 Course on Shoulder and Hip", oleh Prof. Carlo Martinoli's. 27-29 Mei 2019, National University Hospital, Singapore.
- Workshop: Inside the Joint "Beyond OA Management", 27 – 28 Juli 2018, Vietnam
- Seminar and Workshop: APMEC 2019 "Education For Health, 9 - 13 Januari 2019, Singapore
- Workshop: "Management of Spasticity with Botulinum Toxin Injection", 3 – 4 Maret 2018, di Rumah Sakt Umum dr.Soetomo
- Workshop: "USG – Guided PRP Injection" 15 – 16 Agustus 2017, Surabaya
- Workshop and Seminar: "From Foundational Bioscience to Human Functioning" , 15 – 16 Agustus 2017, Surabaya
- Seminar: "Sinergi dalam Profesionalisme Untuk Indonesia Sehat" , 28 Januari 2017, Makassar

RIWAYAT PENELITIAN DAN PUBLIKASI

- Oral presentation "*The influence of heel height increase in male into erector spinae muscle while walking*" in the 20th European congress of physical medicine and Rehabilitation, Estoril – Potugal April 2016

- Poster presentation "*Length of working in women labour in cigarette factory and incidence of carpal tunnel syndrome; a descriptive study*" in 7th world congress of the international society of physical and rehabilitation medicine, Beijing 2013
- Poster presentation "*Cardiac rehabilitation of patient with tetralogy of fallot with total correction by beating heart technique: A case report* "in The 3rd Asia – Oceanian Conference of Physical and Rehabilitation Medicine, Bali, 2012.

RIWAYAT ORGANISASI DAN JABATAN

- Anggota The American Osteopathic Association of Prolotherapy R egenerative Medicine sejak April 2019, Austin
- Anggota HUM-RC (Hasanuddin University Medical Research Center) 2016 – sekarang
- Anggota Association Medical Doctor of Asia 2006 – 2008
- Anggota Ikatan Dokter Indonesia 2007 – sekarang
- Anggota Perhimpunan Dokter Spesialis Kedokteran Fisik dan Rehabilitasi Indonesia 2015 – sekarang

Makassar 2021

dr. Yose Waluyo, Sp.KFR