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LAMPIRAN

Lampiran 1. Lembar Informed Consent

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
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FORMULIR PERSETUJUAN SETELAH PENJELASAN

Saya yang bertandatangan di bawah ini :
Nama : .....
Umur : .....
Masa Kerja : .....
Satuan : .....
Alamat : .....
.....
setelah mendengar/membaca dan mengerti penjelasan yang diberikan mengenai tujuan, manfaat, dan apa yang akan dilakukan pada penelitian ini, menyatakan setuju untuk ikut dalam penelitian ini secara sukarela tanpa paksaan.

Saya tahu bahwa keikutsertaan saya ini bersifat sukarela tanpa paksaan, sehingga saya bisa menolak ikut atau mengundurkan diri dari penelitian ini. Saya berhak bertanya atau meminta penjelasan pada peneliti bila masih ada hal yang belum jelas atau masih ada hal yang ingin saya ketahui tentang penelitian ini.

Saya juga mengerti bahwa semua biaya yang dikeluarkan sehubungan dengan penelitian ini, akan ditanggung oleh peneliti. Saya percaya bahwa keamanan dan kerahasiaan data penelitian akan terjamin dan saya dengan ini menyetujui semua data saya yang dihasilkan pada penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Dengan membubuhkan tandatangan saya di bawah ini, saya menegaskan keikutsertaan saya secara sukarela dalam studi penelitian ini.

	Nama	**Tanda tangan**	**Tgl/Bln/Thn**
Responden	.....	.....	.....
Saksi 1	.....	.....	.....
Saksi 2	.....	.....	.....

Penanggung jawab penelitian :
Nama : dr. Elvida Christi Imelda Tahiya, Sp.B, M.Biomed
Alamat : Perumahan Citra Land Ambon
Tlp : 081311136898

Penanggung jawab Medis :
DR.dr. Ronald Lusikooy, SpB-KBD
Alamat : Makassar
HP :

Lampiran 2. Data Dasar Penelitian

No sampel	Nama	No RM	Jenis Kelamin	Umur	Lokasi Jaringan	Hasil PA	GRADING	Derajat Diferensiasi	Regimen chemotherapy	CEA pre chemo	CEA post chemo	Ukuran tumor pre chemo	Ukuran tumor post chemo	Gen TS	Gen DPD	Gen MTHFR
1	Tn Rusdi	620428	Laki-laki	52	Rectum	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	8,21	6,1	15	14	13,225	10,815	6,063
2	Tn Ismail Masengo	622273	Laki-laki	48	Sigmoid	Adenocarcinoma Rectum	Low Grade		Xelox	6,39	5,2	8	4	7,531	6,711	10,733
3	Ny Rosma	616316	Perempuan	43	Sigmoid	Adenocarcinoma Rectum	High Grade		Xelox	10,68	3,98	9	5	8,228	7,438	11,449
4	Tn Manto	616650	Laki-laki	44	Colon Ascendens	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	4,21	3,65	16	5	9,437	8,451	8,746
5	Ny Sumarni	540065	Perempuan	52	Sigmoid	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	34,1	33,18	10	9	13,307	11,45	6,275
6	Tn Rasid	607556	Laki-laki	38	Rectum	Adenocarcinoma Colon	Low Grade		Xelox	12,95	10,51	5	3	8,781	7,778	9,583
7	Ny Ramayana	615099	Perempuan	48	Sigmoid	Adenocarcinoma Colon Sigmoid		Well Differentiated	Xelox	14,72	8,5	13	12	8,267	7,581	9,395
8	Tn Hendrik Anggara	607556	Laki-laki	38	Rectum	Adenocarcinoma Rectum		Well Differentiated	Xelox	6,12	5,1	7	5	8,693	8,319	8,668
9	Ny Ni Luh Merta	614006	Perempuan	40	Colon Ascendens	Adenocarcinoma Colon	Low Grade		Xelox	12,94	10,71	15	14	12,801	11,331	6,293
10	Ny Nurhana	614108	Perempuan	38	Rectum	Adenocarcinoma Rectosigmoid		Moderately Differentiated	Xelox	2,8	2,1	8	5	8,608	7,888	9,953
11	Tn Betamas	613126	Laki-laki	38	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	15,26	11,72	10	6	8,92	7,67	9,825
12	Ny Nikmatia	625443	Perempuan	52	Sigmoid	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	2,34	1,8	8	5	9,321	7,674	9,803
13	Tn Banyus	470456	Laki-laki	38	Rectum	Adenocarcinoma Rectum	High Grade		Xelox	3,19	1,98	2	1	8,807	7,527	9,735
14	Ny Wa Amu	611863	Perempuan	57	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	8,53	5,37	4	2	8,797	8,264	9,643
15	Tn Amiruddin Lenru	611096	Laki-laki	49	Sigmoid	Adenocarcinoma Rectum		Well Differentiated	Xelox	2,74	1,29	7	5	9,132	8,356	8,818
16	Tn Husriyansyal Yahya	611990	Laki-laki	29	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	14,29	12,27	9	12	9,204	8,004	8,969
17	Tn La Ode Hadia	609469	Laki-laki	51	Colon Ascendens	Adenocarcinoma Rectum		Well differentiated	Xelox	2,81	1,82	6	7	8,814	7,668	9,233
18	Ny Ruci Fitriah	610396	Perempuan	42	Colon transversum	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	1,56	1,38	10	7	9,012	7,815	9,35
19	Tn La Masri	614388	Laki-laki	43	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	6,3	5,1	15	6	13,083	6,522	10,601
20	Tn Sutarno	626055	Laki-laki	56	Colon Ascendens	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	4,32	3,56	8	6	8,978	7,627	10,046
21	Ny Mutia	620034	Perempuan	48	Colon Ascendens	Adenocarcinoma Colon	Low Grade		Xelox	11,82	9,47	9	8	13,513	10,762	6,148
22	Tn Muchsony	617783	Laki-laki	62	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	14,3	10,35	12	10	8,804	7,697	9,176
23	Tn Komarudin	611006	Laki-laki	48	Sigmoid	Adenocarcinoma Rectum	Low Grade		Xelox	8,52	4,97	8	5	9,061	7,604	8,933
24	Tn Yusri	611436	Laki-laki	30	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	2,68	1,11	17	8	8,402	7,538	9,927
25	Ny Suciati	610396	Perempuan	43	Colon transversum	Adenocarcinoma Rectum		Well differentiated	Xelox	9,9	4,02	8	5	9,488	7,977	8,867
26	Tn Agus Suhartono	615440	Laki-laki	45	Colon Ascendens	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	2,66	1,32	10	5	8,627	8,176	9,432
27	Tn Ahmad Soleh	619901	Laki-laki	33	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	11,9	8,56	16	12	8,882	8,081	8,786
28	Tn Azis Suyidno	611348	Laki-laki	43	Rectum	Adenocarcinoma Colon	Low Grade		Xelox	7,3	2,33	13	6	7,867	4,866	10902
29	Tn La Maawi	621893	Laki-laki	43	Colon transversum	Adenocarcinoma Rectum	High Grade		Xelox	12,27	4,68	9	6	9,323	4,742	9,021
30	Tn Sulfikar	612256	Laki-laki	41	Rectum	Adenocarcinoma Rectum	Low Grade		Xelox	8,35	4,89	8	5	8,992	4,507	10,066
31	Ny Wa Meliani	624451	Perempuan	57	Colon Descendens	Adenocarcinoma Rectosigmoid		Moderately Differentiated	Xelox	13,34	12,56	11	6	13,142	11,171	6,497
32	Tn Rudy Sutopo	613387	Laki-laki	43	Rectum	Adenocarcinoma Rectum		Moderately Differentiated	Xelox	5,32	4,21	7	4	9,237	7,869	9,525
33	Tn La Hamdani	628740	Laki-laki	62	Colon Ascendens	Adenocarcinoma Rectum	Low Grade		Xelox	7,98	5,76	8	5	9,067	8,309	9,255
34	Tn Hagusdan	608766	Laki-laki	45	Rectum	Adenocarcinoma Rectum		Well Differentiated	Xelox	7,68	5,29	14	11	9,103	8,312	9,421
35	Ny Yulaeka	520977	Perempuan	51	Colon Descendens	Adenocarcinoma Rectum	Low Grade		Xelox	5,21	5,1	3	2	8,693	8,186	9,755
36	Tn Muhamad Dandi	604390	Laki-laki	53	Rectum	Adenocarcinoma Rectum		Well Differentiated	Xelox	8,34	6,76	5	3	8,839	8,079	9,664

LAMPIRAN

LAMPIRAN

Karakteristik Sampel Penelitian

Statistics

		Jenis Kelamin	Lokasi Jaringan	Hasil PA	Usia
N	Valid	36	36	36	36
	Missing	0	0	0	0

Jenis Kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pria	24	66.7	66.7	66.7
	Wanita	12	33.3	33.3	100.0
	Total	36	100.0	100.0	

Lokasi Jaringan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rectum	17	47.2	47.2	47.2
	Sigmoid	7	19.4	19.4	66.7
	Colon Ascendens	7	19.4	19.4	86.1
	Colon transversum	3	8.3	8.3	94.4
	Colon Descendens	2	5.6	5.6	100.0
	Total	36	100.0	100.0	

Hasil PA

	Frequency	Percent	Valid Percent	Cumulative Percent
noma Rectum	29	80.6	80.6	80.6
noma Colon	4	11.1	11.1	91.7

	Adenocarcinoma Colon Sigmoid	1	2.8	2.8	94.4
	Adenocarcinoma Rectosigmoid	2	5.6	5.6	100.0
	Total	36	100.0	100.0	

Usia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	31 - 40	9	25.0	25.0	25.0
	41 - 50	16	44.4	44.4	69.4
	51 - 60	9	25.0	25.0	94.4
	>= 60	2	5.6	5.6	100.0
	Total	36	100.0	100.0	

Pengujian Homogenitas Sampel Penelitian

Mann-Whitney Test

Test Statistics[a]

	Jenis Kelamin
Mann-Whitney U	142.000
Wilcoxon W	247.000
Z	-.477
Asymp. Sig. (2-tailed)	.634
Exact Sig. [2*(1-tailed Sig.)]	.713[b]

a. Grouping Variable: Ukuran Tumor

b. Not corrected for ties.

Tests of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Based on Mean	1.204	1	34	.280
Based on Median	.635	1	34	.431

	Based on Median and with adjusted df	.635	1	30.894	.432
	Based on trimmed mean	.851	1	34	.363
Hasil PA	Based on Mean	1.857	1	34	.182
	Based on Median	.509	1	34	.480
	Based on Median and with adjusted df	.509	1	29.845	.481
	Based on trimmed mean	1.442	1	34	.238
Usia	Based on Mean	11.361	1	34	.002
	Based on Median	8.142	1	34	.007
	Based on Median and with adjusted df	8.142	1	32.611	.007
	Based on trimmed mean	10.753	1	34	.002

Perubahan Ukuran Tumor dan CEA Pasien Sebelum dan Setelah Kemoterapi serta Ekspresi Gen TS, Gen DPD, dan Gen MTHFR

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CEA pre chemo	36	1.56	34.10	8.6675	6.01655
CEA post chemo	36	1.11	33.18	6.2972	5.70102
Ukuran tumor pre chemo	36	2.00	17.00	9.5278	3.79839
Ukuran tumor post chemo	36	1.00	14.00	6.5000	3.29935
Valid N (listwise)	36				

Wilcoxon Signed Ranks Test

Test Statistics[a]

	CEA post chemo - CEA pre chemo	Ukuran tumor post chemo - Ukuran tumor pre chemo

Z	-5.232[b]	-4.859[b]
Asymp. Sig. (2-tailed)	.000	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
CEA	Based on Mean	2.346	1	34	.135
	Based on Median	.949	1	34	.337
	Based on Median and with adjusted df	.949	1	30.032	.338
	Based on trimmed mean	1.981	1	34	.168
Ukuran_Tumor	Based on Mean	1.906	1	34	.176
	Based on Median	.602	1	34	.443
	Based on Median and with adjusted df	.602	1	27.595	.445
	Based on trimmed mean	1.489	1	34	.231
Gen_TS	Based on Mean	7.753	1	34	.009
	Based on Median	1.521	1	34	.226
	Based on Median and with adjusted df	1.521	1	28.108	.228
	Based on trimmed mean	7.149	1	34	.011
Gen_DPD	Based on Mean	1.223	1	34	.277
	Based on Median	.210	1	34	.650
	Based on Median and with adjusted df	.210	1	33.776	.650
	Based on trimmed mean	.919	1	34	.345
Gen_MTHFR	Based on Mean	2.769	1	34	.105
	Based on Median	.628	1	34	.433
	Based on Median and with adjusted df	.628	1	21.000	.437
	Based on trimmed mean	.628	1	34	.434

One-Sample Kolmogorov-Smirnov Test

	CEA	Ukuran_Tumor	Gen_TS	Gen_DPD	Gen_MTHFR

N		36	36	36	36	36
Normal Parameters[a,b]	Mean	2.3703	3.0278	9.5552	8.0213	311.6571
	Std. Deviation	1.90699	2.67780	1.69350	1.58206	1815.48782
Most Extreme Differences	Absolute	.180	.226	.349	.254	.538
	Positive	.180	.226	.349	.254	.538
	Negative	-.118	-.169	-.161	-.217	-.433
Test Statistic		.180	.226	.349	.254	.538
Asymp. Sig. (2-tailed)[c]		.005	.000	.000	.000	.000

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
1CEA	14	.18	6.22	2.1379	1.56352
1Tumor	14	-3.00	4.00	1.3571	1.73680
1Gen TS	14	8.27	13.51	10.1239	2.04412
1Gen DPD	14	7.58	11.45	8.8441	1.50533
1Gen MTHFR	14	6.06	10.05	8.3315	1.44334
2CEA	22	.11	7.59	2.5182	2.11867
2Tumor	22	1.00	11.00	4.0909	2.65310
2Gen TS	22	7.53	13.14	9.1932	1.35660
2Gen DPD	22	4.51	11.17	7.4976	1.42479
2Gen MTHFR	22	6.50	11.45	9.6325	.97085
Valid N (listwise)	14				

Mann-Whitney Test

Test Statistics[a]

	CEA	Tumor	Gen TS	Gen DPD	Gen MTHFR
	146.000	51.500	112.500	82.000	54.000
	251.000	156.500	365.500	335.000	159.000
	-.260	-3.390	-1.347	-2.336	-3.245

Asymp. Sig. (2-tailed)	.795	.001	.178	.019	.001
Exact Sig. [2*(1-tailed Sig.)]	.810[b]	.001[b]	.180[b]	.019[b]	.001[b]

a. Grouping Variable: Ukuran Tumor

b. Not corrected for ties.

Regresi Logistik dengan variabel predictor adalah CEA

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	37.921[a]	.247	.334

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Gen TS	-.617	.559	1.215	1	.270	.540	.180	1.616
	Gen DPD	-.731	.527	1.923	1	.166	.482	.171	1.353
	Gen MTHFR	.000	.003	.018	1	.895	1.000	.994	1.007
	Constant	10.842	6.466	2.812	1	.094	51138.517		

a. Variable(s) entered on step 1: Gen TS, Gen DPD, Gen MTHFR.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6.498	7	.483

Regresi Logistik dengan variabel predictor adalah Ukuran Tumor

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
		.346	.469

ıted at iteration number 15 because changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Gen TS	2.302	1.168	3.882	1	.049	9.994	1.012	98.683
	Gen DPD	-.432	.681	.403	1	.526	.649	.171	2.467
	Gen MTHFR	3.368	1.504	5.016	1	.025	29.014	1.523	552.759
	Constant	-48.105	23.734	4.108	1	.043	.000		

a. Variable(s) entered on step 1: Gen TS, Gen DPD, Gen MTHFR.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.433	7	.607

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6.498	7	.483

Kurva ROC

Case Processing Summary

Ukuran Tumor	Valid N (listwise)
Positive[a]	22
Negative	14

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Respon.

he

s):

Area
.365

The test result variable(s): Gen TS has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

Coordinates of the Curve

Test Result Variable(s): Gen TS

Positive if Greater Than or Equal To[a]	Sensitivity	1 - Specificity
6.5310	1.000	1.000
7.6990	.955	1.000
8.0475	.909	1.000
8.2475	.864	1.000
8.3345	.864	.929
8.5050	.818	.929
8.6175	.773	.929
8.6600	.727	.929
8.7370	.682	.857
8.7890	.636	.857
8.8005	.591	.857
8.8055	.591	.786
8.8105	.545	.786
8.8265	.545	.714
8.8605	.500	.714
8.9010	.500	.643
8.9490	.455	.643
	.455	.571
	.409	.571
	.409	.500
	.364	.500
	.318	.500

9.1175	.318	.429
9.1680	.318	.357
9.2205	.318	.286
9.2790	.273	.286
9.3220	.227	.286
9.3800	.182	.286
9.4625	.136	.286
11.1445	.091	.286
12.9420	.091	.214
13.1125	.045	.214
13.1835	.000	.214
13.2660	.000	.143
13.4100	.000	.071
14.5130	.000	.000

The test result variable(s): Gen TS has at least one tie between the positive actual state group and the negative actual state group.

a. The smallest cutoff value is the minimum observed test value minus 1, and the largest cutoff value is the maximum observed test value plus 1. All the other cutoff values are the averages of two consecutive ordered observed test values.

Case Processing Summary

Ukuran Tumor	Valid N (listwise)
Positive[a]	22
Negative	14

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

l state is

Area Under the Curve

Test Result Variable(s): Gen DPD

Area
.266

Coordinates of the Curve

Test Result Variable(s): Gen DPD

Positive if Greater Than or Equal To[a]	Sensitivity	1 - Specificity
3.5070	1.000	1.000
4.6245	.955	1.000
4.8040	.909	1.000
5.6940	.864	1.000
6.6165	.818	1.000
7.0745	.773	1.000
7.4825	.727	1.000
7.5325	.682	1.000
7.5595	.636	1.000
7.5925	.636	.929
7.6155	.591	.929
7.6475	.591	.857
7.6690	.591	.786
7.6720	.545	.786
7.6855	.500	.786
7.7375	.500	.714
7.7965	.455	.714
	.455	.643
	.409	.643
	.364	.643
	.318	.643
	.318	.571

8.0800	.273	.571
8.1285	.273	.500
8.1810	.227	.500
8.2250	.182	.500
8.2865	.136	.500
8.3105	.091	.500
8.3155	.091	.429
8.3375	.091	.357
8.4035	.091	.286
9.6065	.045	.286
10.7885	.045	.214
10.9930	.045	.143
11.2510	.000	.143
11.3905	.000	.071
12.4500	.000	.000

a. The smallest cutoff value is the minimum observed test value minus 1, and the largest cutoff value is the maximum observed test value plus 1. All the other cutoff values are the averages of two consecutive ordered observed test values.

Case Processing Summary

Ukuran Tumor	Valid N (listwise)
Positive[a]	22
Negative	14

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Respon.

Area Under the Curve

Test Result Variable(s): Gen MTHFR

Area
.825

Coordinates of the Curve

Test Result Variable(s): Gen MTHFR

Positive if Greater Than or Equal To[a]	Sensitivity	1 - Specificity
5.0630	1.000	1.000
6.1055	1.000	.929
6.2115	1.000	.857
6.2840	1.000	.786
6.3950	1.000	.714
7.5825	.955	.714
8.7070	.955	.643
8.7660	.909	.643
8.8020	.909	.571
8.8425	.909	.500
8.9000	.864	.500
8.9510	.818	.500
8.9950	.818	.429
9.0985	.773	.429
9.2045	.773	.357
9.2440	.773	.286
9.3025	.727	.286
	.727	.214
	.727	.143
	.727	.071
	.682	.071
	.636	.071

9.6130	.591	.071
9.6535	.545	.071
9.6995	.500	.071
9.7450	.455	.071
9.7790	.409	.071
9.8140	.364	.071
9.8760	.318	.071
9.9400	.273	.071
9.9995	.227	.071
10.0560	.227	.000
10.3335	.182	.000
10.6670	.136	.000
10.8175	.091	.000
11.1755	.045	.000
12.4490	.000	.000

a. The smallest cutoff value is the minimum observed test value minus 1, and the largest cutoff value is the maximum observed test value plus 1. All the other cutoff values are the averages of two consecutive ordered observed test values.

Lampiran 3. Rekomendasi Persetujuan Etik

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed.PhD. SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 90/UN4.6.4.5.31/ PP36/ 2024

Tanggal: 20 Februari 2024

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH22060270	No Sponsor	
Peneliti Utama	**dr. Elvida Tahiya, SpB**	Sponsor	
Judul Peneliti	PERAN THYMIDILATE SYNTHASE, DIHIDROPYRIMIDIN DEHYDROGENASE DAN METHYLENETETRAHYDROFOLATE REDUCTASE SEBAGAI PREDIKTOR RESPON KEMOTERAPI 5FU PADA KARSINOMA KOLOREKTAL		
No Versi Protokol	**2**	Tanggal Versi	**16 Februari 2024**
No Versi PSP	**2**	Tanggal Versi	**16 Februari 2024**
Tempat Penelitian	Laboratorium Mikrobiologi FKUH, RSUP dr. Wahidin Sudirohusodo Makassar dan RSUP dr. J. Leimena Ambon		
Jenis Review	☐ Exempted ☐ Expedited ☒ Fullboard Tanggal **19 Juli 2022**	Masa Berlaku **20 Februari 2024** sampai **20 Februari 2025**	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama **Prof. dr. Muh Nasrum Massi,PhD,SpMK, Subsp. Bakt(K)**	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama **dr. Firdaus Hamid, PhD, SpMK(K)**	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 4. Dokumentasi Penelitian

A. Fase Persiapan Bahan

1. Siapkan PCRMIX (Kapabiosystem)

2. Primer RTPCR Gen DPD / Housekeeping Gen GAPDH

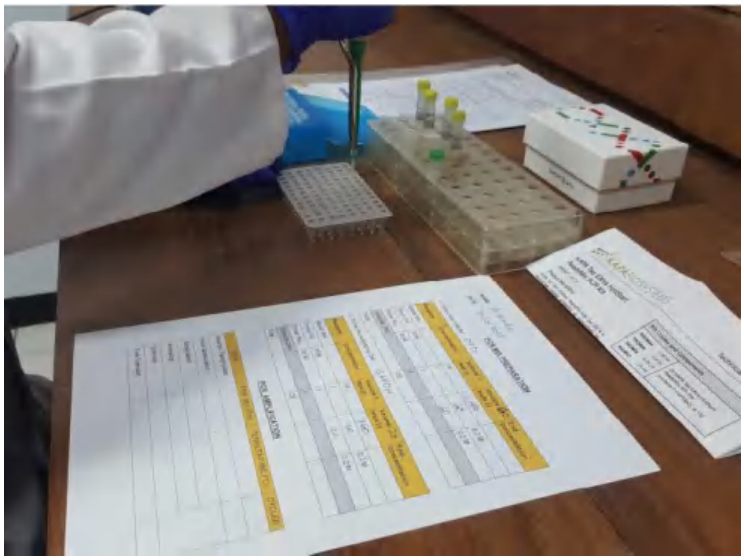
3. Primer RTPCR Gen TS / Housekeeping Gen ATP5E

4. Primer RTPCR Gen MTHFR / Housekeeping Gen HPRT

B. Fase Pengolahan Sampel

1. Mencocokan urutan nukleotida dan rehidrasi primer sesuai protokol dari Macrogen

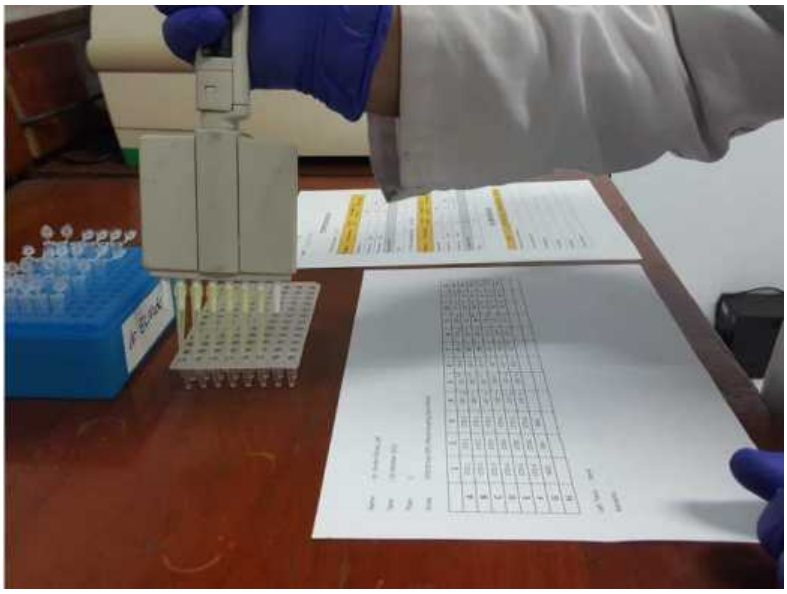
2. Buat PCR mix sesuai layout



3. Setelah disentrifugasi, pindahkan supernatant ke tabung yang baru

4. Ukur konsentrasi template memakai nanodrop sebelum amplifikasi

5. Tambahkan template ke PCR mix sesuai layout



6. Amplifikasi sampel sesuai protocol

7. Protokol ini dioptimalkan untuk instrument realtime PCR machine CFX Connect System (USA)