



ABSTRACT BOOK

The 3rd International Conference in Health Sciences (ICHS) 2019

FACING HEALTH CARE 4.0 :
IMPACT, OPPORTUNITIES AND CHALLENGES



FACULTY OF HEALTH SCIENCES
JENDERAL SOEDIRMAN UNIVERSITY
INDONESIA
2019

CONFERENCE SCHEDULE

Wednesday, July 17	
1	07.30 – 08.10 Participants registration
2	08.30 – 09.00 Opening ceremony
3	09.00 – 09.40 Keynote speech
4	09.40 – 09.50 Coffee break
5	09.50 – 09.55 Introduction of speakers
	09.55 – 10.35 Presentation 1 Prof Dirk – Technical Medical (TechMed) Centre, University of Twente, Netherland
6	10.35 – 11.15 Presentation 2 Prof. Dr. Laksomo Triantoro MSc, PhD – Faculty of Medicine, Universitas Cidrah Mada, Indonesia
7	11.15 – 11.45 Discussion
8	11.45 – 12.05 Sponsor presentation
9	12.05 – 13.05 Lunch break
10	13.05 – 16.30 Oral presentation
Thursday, July 18	
1	08.00 – 08.30 Participants registration
2	08.30 – 09.30 Presentation 3: Adam Layland, MChPara, MHM MChM FInstLM FHEA – Faculty of Health and Life Sciences, Coventry University, UK
	Discussion
3	09.30 – 09.40 Coffee break
4	09.40 – 10.20 Presentation 4: Dr. Teguh Haryo Sasongko (MD, PhD) – Associate Professor, Physiology, Perdana University RCSI, School of Medicine, Malaysia
5	10.20 – 11.00 Presentation 5: Mekar Dwi Anggraeni, SKep, MKeP, PhD – Faculty of Health Sciences, Jenderal Soedman University, Indonesia
	Discussion
6	11.00 – 11.40 Discussion
7	11.40 – 12.40 Lunch break
8	12.40 – 16.00 Oral Presentation
9	16.00 – 16.30 Closing ceremony

SCHEDULE OF PRESENTATION First Day (17 July 2019)

Day/Date : Wednesday/17 July 2019
Room : Arjuna 6
Time : 13.05-16.30
Moderator :

No	Kode Abstrak	Names of Authors	Title
1	ABS-3	Dwi Sarwani, Sri Rejeki, Sivi Pramati, Mars Wijayanti, Devi Octaviana, Surbhan	The Effect of Climate and Intervention Methods on Malaria Incidence : A Time Series Analysis
2	ABS-11	Sivi Pramati, Mars Wijayanti, Devi Octaviana, Fuando Alifathana Putra Siti Nurhayati, Sri Nurkeha, Sulistyawati Sulistyawati	Dengue Virus Transmission during Outbreak in Endemic Area : A Spatial and Temporal Analysis
3	ABS-20	Ervati Darwin, Eka Filtra Efil, Eva Decrol, Dwitya Elvira	The Relationship between Endothelial Nitric Oxide Synthase with Dyslipidemia in Coronary Heart Disease
4	ABS-22	Nor Anzary Yacob, Rohana Abdul Jalil, Effah Leykera, Nani Draman, Imran Ahmad	Development, Validity and Reliability of Readiness to Change Exercise and Diet (READ)
5	ABS-32	Angelita Bunga, Anegraini, Sundari Wirasmi	Treatment Patterns of Acute Respiratory Tract Infections in Children Under-
6	ABS-206	Nurul Huda MH, Norwati D, Ibrahim MS, Zawawi N	Effectiveness of an Online Preparatory Quiz in Enhancing Basic Clinical Skills in an Introductory Clinical Skills Course
7	ABS-42	Jerry V. Manlapaz, Martelle San Pedro, Edine Reana Santos, Joseph Angelo Silva, Patricia Rose Soriano, Amria Lea Sta. Maria, Ma. Cheeny Sy, Ice Alyhs Tan, Gillian Endrea Unali	Dengaxia Phenomenon: Lived Experiences of Parents with Dengaxia-Vaccinated Children
8	ABS-43	Sunarto, Bina Ikawati, Tri Wijayanti	Spatial Distribution of Malaria Vector Breeding Habitats in Purworejo District, Central Java Province
9	ABS-52	Nikson Sitons, Oster Suriani, Indri Yunita Suryaputri	Relationship between Blood Pressure and Quality of Life of Patients with Type 2 Diabetes Mellitus in the Bogor City Community in 2018
10	ABS-76	Manlapaz Jerry V., Sangalang John Alfonso M., Sibayan Beatriz Antonette F., Solis, Sean Maynard M.,	Level of Knowledge of Senior High School Health Allied Students from a Selected University in

11	ABS-91	Rauza Sukma Rita, Husna Yetti, Putra Santoso, Nita Afriani	Metro Manila on Human Immunodeficiency Virus (HIV)
12	ABS-95	Rauza Sukma Rita, Biomechy Okionahopuri, Eka Kurniawan	Effect of Catechin Isolates from Gambir (<i>Uncaria gambir</i> Roxb) on Fasting Blood Glucose and Glucagon Serum Level in Male Rats (<i>Rattus norvegicus</i>) Induced-by Alloxan
13	ABS-197	Vitri Widyaningsih, Henri Hastuti	The Chronic Effect of Green Tea (<i>Camellia sinensis</i> L.) Drinking on Triglyceride and Total Cholesterol Serum Level in Alloxan-Induced Diabetic Male Rats (<i>Rattus norvegicus</i>)
14	ABS-124	Martini Retno Hestiringsih, Gana Maulika, Sri Yulawati, Susana Purwantisari	A Call For Action: High Smoking and Alcohol Prevalence among Indonesian Male Youth
15	ABS-5	Chong, W. F. W., Ho, M-H. R., Luo, N. & Koh, C. H. G.	Host Characteristic and Virus Strain in Dengue Hemorrhagic Fever (DHF) Patients on Three Health Facilities in Semarang City
			Caregiver Psychosocial Profile and Stroke Rehabilitation Use in Singapore

Day/Date : Wednesday/17 July 2019
Room : Ajiuna 7
Time : 13.05-16.30
Moderator :

No	Kode Abstrak	Names of Authors	Title
1	ABS-4	Wastu Adi Mukono	Factors Construct Validation of SSCRS-Bahasa Indonesia on Pre-Registered Nurses in Central Java
2	ABS-14	Nurul Izzah Shari, Nor Zuraida Zainal, Ng Chong Guan	Cognitive Impairment in Breast Cancer Patients Related to Chemotherapy: A Systematic Review
3	ABS-15	Nor Azryan Yahaya, Khafijah Lim Abdullah, Nor Zuraidah Zainal, Wong Li Ping	The Effects of Psychoeducational Intervention (SYMAB) on Patients Activation Level and Cancer Treatment-Related Concerns among Breast Cancer Patients Undergoing Chemotherapy in Malaysian Population
4	ABS-19	Nurlaila, Tri Sejati Kartika Dewi, Ning Iswati	Behavior of Giving Breast Milk Complement
5	ABS-25	Carlo Bryan C. Borrico, Regie Arceo Bautista, Jea Joel M. Dungca, Corazon C. Borrico	Coping with Menopause-Measures that Woman can Take
6	ABS-45	Ike Mardiani, Agustini, Doni Kurniawan, Sawjii	Phenomenology of Accepting Process and Self Concept Changes to The Hernia Post Surgery Clients in Kebumen Regency, Central Java, Indonesia
7	ABS-48	Aini Yusra, Agung Waluyo	Family Support Toward Adherence and Glycemic Control of Type 2 Diabetes Patient: A Systematic Review
8	ABS-56	Diki Retno Yuliani, Sularyo Hadisaputro, Sri Achadi Nugrahani, Rungati	Is There a Difference in The Influences of Banana, Papaya and Watermelon Consumption on Systolic and Diastolic Blood Pressure of Preeclampsia Pregnant Woman?
9	ABS-61	Sidik Awaludin	Quality of Life in Cardiac Surgery: A concept Analysis
10	ABS-94	Yolita Irene Niref, Anggorowati, Muli Husb Ardani	Clinical Nurses Resilience to Survive and Struggling Against Challenges in Remote Areas: Indonesian Context
11	ABS-108	Dian Susmarini, Made Sumarwati, Ayantri Isworo	Differences of Maternal Infant-Feeding Style in Baby-Led Weaning and Traditional Weaning

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 Room : Asjuna 8
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12	ABS-122	<u>Desak Nyoman Sthi</u>	Factor Contributing to Incident of Patient Safety Within Implementing Patient Safety Goal on Inpatient Depok City Hospital Indonesia
13	ABS-129	<u>Nopi Nur Khasanah</u>	The Efficacy of Mother's Involvement to Serve Comfort on Infants During The Intramuscular Immunization Procedure: A Randomized Controlled Trial
14	ABS-132	<u>Heri Kristianto, Obed Triurcahyo Kriantyo Paundralingga, Danik Aguslin Purwaningrum, Lu'hai Maknun, Rizky Oktavia Primasari, Agung Waluyo</u>	The Effect of Frequency of Dressing Replacement with Betaine Polyhexanide 0.1% on the Formation of Collagen and Epithelial Tissue in Albino Wistar Rats with Grade IIA Burns
15	ABS-13	<u>Nurul Izzah Shari, Nor Zuraida Zainal Ng Chong Guan</u>	Psychometric Properties of the Posttraumatic Growth Inventory Short form (PTGI-SF) Malay Version in cancer patients

No	Kode Abstrak	Names of Authors	Title
1	ABS-8	<u>Samsul Bahri, haryo satrio tomo, iwa khywan hidayat</u>	Effect of PM 2.5, Temperature and Humidity to Lung Vial Capacity During Exercise in three different Exercise Time (8 am, 3 pm, 7 pm)
2	ABS-9	<u>Diki Sumadi, Tommy Apriantono, Kusnaedi, Samsul Bahri</u>	Relevances of Senior High School Physical Education (PENJASORKES) with Sports Course Model in The Preparation Stage at Bandung Institut Teknologi Bandung
3	ABS-18	<u>Satrio Sakti Rumpoko, Vera Septi Sisitash, Sarjoko Lelono</u>	Scuba Diving as an Activity Awareness on The Underwater Environment
4	ABS-225	<u>Christi Adriana, Antonius Nugraha, Deborah Siregar, Elfida Shalahi, Martha Octaria</u>	Causes Analysis of Medication Error in Administration Phase In X Hospital
5	ABS-51	<u>Moh. Nanang Himawan Kusuma, Didik Riasityo, Topo Subartoyo, Ria Laminlartoso, Rurnini</u>	The Effect of Nutritional Status, Mineral-Based Alkaline to Aerobic Level and Body Reversibility during Short-Term Interval Extensive Exercise
6	ABS-58	<u>Sunarno and Djoko Pekk Irianto</u>	The Concept and Practice of A Soccer Training Programs: An Understanding in The Transition Period
7	ABS-60	<u>Moh. Nanang Himawan Kusuma, Ria Laminlartoso, Dwi Priyono, Ulrich Hartmann, Margot Niessen</u>	Plyometrics Drills: A Systematic Review of The Influence of Difference Volume and Intensity of Stretch-Shortening Drills on Effectiveness in Jump Performance for Elite Athlete
8	ABS-62	<u>Herlambang, Fajar Wibowo</u>	An Identification of Talented Players of Modern Football in The Prescriptive of Licensed a Pro-Indonesian Football Trainers
9	ABS-64	<u>Galih Yogi Sanjko, Widyanto</u>	The Effect of Low and Moderate Intensity Exercise on The Lipid Profile of Diabetic Patients
10	ABS-67	<u>DELIK Rikheriyvo Budi, M. Nanang Himawan Kusuma, M. Syatek, Refrenon Hidayat, Topo Subartoyo, Ayu Hiday P</u>	The Analysis of Fundamental Movement Skill in Student Primary School in Mountain Range
11	ABS-77	<u>Mahir Dwi Nurroho, Widyanto</u>	An Analysis of Junior High School

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 Room : Arjuna 9
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			Students Ability in Understanding Law of The Game and Signal Referee Futsal
12	ABS-96	Ranna Marlyn Sihombing, Juhdeliana	Comparison of Pain Intensity of Males dan Females Postoperative Patiens using VAS
13	ABS-80	Jaiang, Abdul Alim	The Contribution Of Body Balance And Leg Muscle Strength Towards Heading Ability In Football Of The Eighth Grade Male Students In Junior High School 1 Argamakmur, North Bengkulu Regency
14	ABS-82	Muhammad Wahyu Arga, Muhammad Hamid Anwar	Efforts to Improve Teacher Ability to Manage Learning Times in Physical Education at Piyungan 1 Junior High School
15	ABS-135	Indro Catur Harwono, Moch Asmawi, Johansyah Lubis	Evaluation on 'The Students' Sports Training and Development Center (PLOP) Program in Central Java

No	Kode Abstrak	Names of Authors	Title
1	ABS-187	Yonifia Anjanika, Tomoliyus	Critical Thinking Through Rhythmic Activity
2	ABS-191	Yurvan Ardisa, Ria Lurnintuarso	Effect of Circuit Training and Gender on Strength of Rugby Athlete in Special Region of Yogyakarta
3	ABS-192	Antonius Tian, Tana Rurion, Tomoliyus	Validation of Alternative Assessment for Rhythmic Activities in Physical Education Learning
4	ABS-193	Asri Diyah, Kusunawardani, Tomoliyus	Physical Education Teachers' Competency in Implementing Curriculum 2013 To Develop Students' Characters and Decision Making Skill
5	ABS-200	Aiceng Dian Purnamasari, Sugiyanto, Siswandari	Impact of Senam Tangganas Sehat (A Public Activity Policy in Tangganas Regency, Lampung)
6	ABS-201	Leni Aprianti, Joni Alpen	To Improve Throw And Catch Of Handball By Frisbee At Penjasokesrek Students Of Riau Islamic University
7	ABS-202	Aref Fatchur Rochman, Yustinus Sukarnin, Galih Yoga Santiko	Physical Fitness Level of Mentally Disabled Children are Able to Educate Students Aged 13-15 and 16-19 Years Old in Sls Tunas Bhakti Peret Year 2013/2014
8	ABS-207	Robby Sakti Parevri	PNF Stretching's Effect on Flexibility Muscles
9	ABS-217	Ridqi Fesiawyan, Indra Jati Kusuma, Ayu Rizky Febriani	The Effect of Problem-Based Learning Model on Critical Thinking Ability and Student Learning Motivation in Physical Education Learning Process
10	ABS-222	Ario Debbian Syeik Rahman	Maximum Oxygen Volume Level Profile (VO2Max) and Levels of Hemoglobin (Hb) Athletes Yongnoodo Akmal Mageslang
11	ABS-223	Dauji Rahdyan, Nursantiko, Widlyanto	Media Development Tutorials of Handball Fundamental for Students Based on Audio-Visual
12	ABS-234	Norsham Juliana, Nadia Ahmad Roslan, Izuddin Fahmy, Abu, Nur Ishani Mohd Fahmi Teng, Abdul	Muscle Strength in Male Youth that Play Archery during Leisure Time Activity

Day/Date : Wednesday/17 July 2019
 Room : Ball Room
 Time : 13.05-16.30
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13	ABS-74	Rahman Hayati, Sahar Aznani Hasna Heru, Md. Aminul Haque, P	Determinants of Multimorbidity in Bangladesh: a Hospital Based Study
14	ABS-79	Eri Wahyuningsih, Yayi Suryo Prabandari, Tyas Retno Wulan, Ira Paramasari, Dyah Woro Dwi Lestari	Does Parent's Gender Shape Adolescent's Behavior? A Study among Indonesian Migrant Worker Families Left Behind
15	ABS-117	Rofiqatul Mubasyroh, Indri Yunita Suryaputri	Impact of Parental Depression on Educational Outcomes in Children 6-12 Years

No	Kode Abstrak	Names of Authors	Title
1	ABS-31	Ibnu Zakki Hesti Permata Sari, Farida, Afiha Rachma Sulistyanning	Nutrition Education Based on Multi-Media Approach Improves Nutrition Knowledge and Unhealthy Snacking Habits in Adolescent
2	ABS-41	Dwipratiti, Domo Indarto, Paramasari Dirgahayu	Reduction of Dipeptidyl Peptidase 4 Activity in Patients with Type 2 Diabetes Mellitus who Consumed fruits before Meals
3	ABS-59	Hery Winarsi, Aisyah Tri Septiana, Syekhanti Nungestu Kasnen	Germination increases the dissolved protein, dietary fiber, and phenolic antioxidants content in yogurt based on red bean, a functional obesity drink
4	ABS-63	Sarwono Sarwono, Aikah Proverawati	Hepatoprotective Effect of Date Seeds Works Through The Antioxidant Mechanism
5	ABS-84	Yovia Puri Subartjo, Dika Betaditya, Fiska Cira Agustia, Gunintang Rama Ramadhan	Metabolic Syndrome Prevalence among Rural Women: Community Based Study in Cikongk, Banyuwang, Central Java, Indonesia
6	ABS-90	Dyah Linyarni Purnamasari, Endo Dardjito, Kusnandar	Comparison Anthropometry of School Children in Banyuwang Regency with WHO Anthropometric Standards
7	ABS-167	Yulinda Kurniasari, Siska Arifiyana, Agus Praslowo, Veriani Aprilia, Hamam Hadi	Porang (Amorphophallus Oncophyllus) Flour with Strobilanthes crispus Maceration Reduced Blood Glucose Level in Streptozotocin-Induced Diabetic Rats
8	ABS-185	Hiva Alif Rahmah, Lutfan Lazuardi, Susechyoewati, A.Fahmy Arif Tsani	The advantages of NCP Electronic in nutrition care documentation at Saiful Anwar Hospital Malang, Indonesia
9	ABS-199	Andi Eka Yudianto, Ali Khomsan, Cesilia Meti, Dwitiani, Nauli Mulharan Nurdin	Association Between Sweet Food with Blood Glucose Status of Men and Women in Rural Areas
10	ABS-215	Meirina Dwi Larasati, Nurul Dwi Anggaryani, Susi Tursilowati, Ria Ambarwati, Yuniarti	Association between Knowledge and Attitude to Dietary Intake and Nutritional Status among HIV-infected Adults

SCHEDULE OF PRESENTATION
Second Day (18 July 2019)

Day/Date : Thursday/18 July 2019
Room : Arjuna 6
Time : 12.40-16.00
Moderator :

11	ABS-140	Siti Nurhayati, Dyah Umiyanti, Muhammad Syate'i	A Success Model of E-Health Implementation in The Service Area of Department of Health of Banyumas Regency Indonesia
12	ABS-184	Miliah Irtahmah, Yulia Kurniawati, V.Y.Susilo, S.Scitjowati, Aisyah Eliyanti	Radioiodine for Breast Cancer Therapy : A pilot Project in SKBR-3 Cell Line
13	ABS-203	Ami Amr, Eryati Darwin, Hasniwati	Effect of Propoxur to The Level Of Estradiol and Estradiol Reseptor in Rat
14	ABS-218	Rani Aulia Inran, Debora Panglidan, Niko Sameva Uletka	Lean Approach to Increase Pharmacy Service Efficiency of Hospital ABC
15	ABS-219	Wahyuni, Muhammad Ilyasin, Suwanto	The Relationship Between Body Mass Index and Static Balance on Elderly in Posyandu Lansia Karangasem Laweyan Surakarta
16	ABS-113	Harvati, Andi Noor Kholikha, Maharni Nurgadriasi Djuddawi	Effectiveness of Extract Lemongrass (Cymbopogon Citratus) on Incision Wound Healing in White Mice

No	Kode Abstrak	Names of Authors	Title
1	ABS-136	Kristina L Tobing, Oster Suriani, Dina Bisara, Feri Ahmadi, Felly Senewel	Pattern of Referencing Tuberculosis Case for Molekular Rapid Test (MRT) in Health Facilities in Indonesia, 2018
2	ABS-165	M. Ari Wuryant, Sheila Intania, Ari Udiyono, Martini	The Resistance Status of Anopheltes spp Strain High Plateau Area in Kaligesing Purworejo District-Indonesia Against Lambda-cyhalothrin
3	ABS-168	Lourdes Ebliane - Balderian, Jerry V. Manlapaz	Experiences of Adult Clients Diagnosed with Schistosomiasis in Eastern Visayas Philippines
4	ABS-181	Yannaria Tursinawati, Kartakadewi, Ari Yunastuti	Correlation between Age, Gender and Body Mass Index with Fasting Plasma Glucose Among Javanese Type 2 Diabetes Mellitus Patients
5	ABS-182	Asyiah Eliyanti, Miliah Irtahmah, Yulia Kurniawati	Analysis of Proliferation Rate of Iodine Treatment in Breast Cancer Cell Line
6	ABS-195	Arum Kartakadewi, Yananria Tursinawati, Susanti	Blood Pressure Role in Fasting Blood Glucose Control among the Javanese Type 2 DM Patients
7	ABS-53	Lia Kartika, Georgina Dwi Astuti Perma, Anastasia Geraldine Sagitadewi, Alandia	The Utilization of Current Technology in Raising Children Awareness of The Needs of Nutrition: A Literature Review
8	ABS-237	Firda Yanuar Pradani, Mutiara Widawati, Sivi Pramatama Mars Wijayanti	Uncovering Potential of Mimba and Plectranium Extract as Biolarvicide of Aedes aegypti for Dengue Control
9	ABS-239	Daniel Joko Wahyono, Anton Budhi Darmawan, Sivi Pramatama Mars Wijayanti, Miranti Oviani, Yudi Wibowo, Arts Mumpuni, Diyah Kristiansari, Gita Nawangtanti, Dwi Uliani Anjarwati, Dian Kristiantoro, Hendro Pramono, Meyta Pratiwi, Muhammad Riza Channadi, Devi Octaviana, Dwi	The Prevalence of Streptococcus Pneumoniae which Colonizes Nasopharynx in Primary School (6-12 Years) Children Age with Otitis Media Acute Patient in Banyumas Regency

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 Room : Arjuna 7
 Time : 12.40-16.00
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10	ABS-28	Sarwani, Sri Rejeki, Korie Sababilla, Wiswa Toftiska, Dodi Sabari Carlo Bryan C. Borrico	Filipino Elderly Awareness and Availment of Their Government Grant Rights, Benefits, and Privileges and Their Preter Living Arrangement Factors Affecting of Delaying Payment of National Health Insurance (BPJS Kesehatan) Premium among Participants of The Informal Sector in Banyuwang Regency
11	ABS-34	Arth Dyaning Intasari, Budi Aji, Siti Masfiah, Laksomo Trisnantoro, Julia Hendrartini	The Analysis of Antenatal Classes Performance Based on The Success Indicators of Process from Mothers' Perspectives
12	ABS-68	Ayau Sraini, Sri Suwrti, Zahroh Shalhiyah, Sri Achadi Nugrahenti	The Timeliness of Complete Basic Immunization for Children Aged 12-23 Months Old: A Neglected Indicators in Immunization Services?
13	ABS-69	Nike Astorina Yunita Dewanti, Ayun Sriatni, Yulia Martini, Nurhasnadar Nandini	Creating Awareness about Climate Change Impacts on Human Health: An Online Mass Media Analysis in Indonesia
14	ABS-127	Budi Aji	Experience of Family Members as Primary Caregivers to Children with Congenital Anomaly
15	ABS-33	Jea Joel Mendoza-Dungga	

No	Kode Abstrak	Names of Authors	Title
1	ABS-138	Dilla Firi Ayu Lestari, Subhartini Ismail, Meira Erwani	The Continuing Care Program in Patients with Mechanical Ventilation: A Phenomenology Study
2	ABS-161	Sri Suparti, Hilda Febrianti	Is There an Correlation Between Intradialytic Weight Gain (IDWG) and Interdialytic Weight Gain (IDWG)?
3	ABS-164	Luftaul Latifah	Autogenic Relaxation Techniques for Perinatal Therapy : A Literature Review
4	ABS-170	Yunita Sari, Ernani Sutrisna, Hartono	The Long Duration of Electrical Stimulation Impairs Wound Healing Process
5	ABS-171	Yunita Sari, Arif Setyo Upoyo, Agis Taufik	Foot Self-Care and Its Related Factors in Diabetic Patients
6	ABS-178	Faizal Muhammad	Stability, Validity, and Internal Consistency Reliability, and Interrater Reliability of Behavioral Pain Scale Non-Intubated in Patients With Loss of Consciousness in High Care Unit of UNS Hospital
7	ABS-179	Indera Aini, Subhartini Ismail, Rita Hadi Widayastuti	Care Management of Dying Dignity Geriatric Patient to Dying Dignity
8	ABS-186	Rahmi Setiyani, Made Sunarwati, Dian Ramawati	Where my parents should be living if they are old? A study of future living arrangement for aging parents
9	ABS-175	Feri Alnardi	Analysis Descriptive Stunting in Indonesia (Health Research Basic years 2007, 2010, 2013, 2018)
10	ABS-205	Okti Sri Purwanti, Agus Sudaryanto, Tulus Dwi Hartanto, Dafia Ibnu Fauzan	Dengue Hemorrhagic Fever Incidence Trend of the 2010-2016 Period in Indonesia
11	ABS-214	Budi Santoso, Junati Sahar	Peer-Relapse Prevention for Drug Addictions: A Systematic Review
12	ABS-216	Arif Inam Hidayat, Waraporn Kongsuwan, Kitikom Nihamat	Dilemmatic Situation during Muslim Nurses Involvement in End of Life Decision Making in an Intensive Care Unit: A Phenomenological Study.
13	ABS-228	Eri Rahmawati, Dian Susmarini, Mevita Devi Purnamasari	Exercise on Neonatus Undergoing Phototherapy
14	ABS-229	Hussen SZ, Shamsudin K	The Millennium Year: Okler Adult & Loneliness
15	ABS-24	Carlo Bryan C. Borrico and	Emotional Intelligence and Adversity

Corazon C. Borrico	Quotient as predictors to Work Motivation of Nurse Academi Managers
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 Room : Arjuna 8
 Time : 12.40-16.00
 Moderator :

No	Kode Abstrak	Names of Authors	Title
1	ABS-83	Puruti Yriadha Maharti, Sugeng Purwanto	Increasing Female Students' Motivation in Physical Education Lesson by Giving Traditional Games for Warning Up
2	ABS-85	Angga Susanto, Fx Sugyanto	Relationship of Achievement Motivation with Academic Achievement of Physical Education
3	ABS-87	Ngadiman, Fuad Noor Heza, Bayu Suko Wahono	Determination Method of Region Superior Sport
4	ABS-88	Fuad Noor Heza, Kusnandar, Indra Jati Kusuma, Panuwun Joko	The Coconut Sugar Inhibit The Level of Malondialdehyde Plasma After Submaximal Physical Activities
5	ABS-97	Erwin Setyo Kriswanto, Hari Setjono, Edy Miharjo	Exercise Ratio 1:2; Changes of Anaerobic Threshold and Lactate Acid Level
6	ABS-111	Avu Rizky Febrini, Rohman Hidayat, Bayu Suko Wahono	Water Activity Increase Cardiovascular Endurance of PJKR Students at the Faculty of Health Sciences, Jenderal Soedirman University
7	ABS-134	Novriansyah, Djoko Pekik Irianto	The Contribution Of The Strength Of Leg Muscle And Eye-Hand Coordination Toward The Ability Of Free Throws In Basketball
8	ABS-143	Ahmad Ridwan	The Influence of Weight Training with Mineral Bottle and Proprioceptive Neuromuscular Facilitation Combined Physical Fitness Toward Housewives in Bangjuran Hamlet Tempurejo Village Tempuran Subdistrict Magelang
9	ABS-146	Gupo Matvavodha, Caly Setiawan	Effect of Shuttle Run and Zig-Zag Run Drills Using a Ball on the Soccer Drbbling Skills of The SSB Gelora Karya Students in Jambi
10	ABS-147	Ikhwan Bakhtri Fauzi, Ali Sata Graha, Tomoliyus	The Classification of Injury, Understanding of Handling Injuries, and the Location of the Injuries of The Dancers During Practice in Sanggar Omah Wayang Kalen
11	ABS-150	Nanda Dwicahya	The Effect of Hit Bodyweight Training to Physical Fitness, Bmi and

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12	ABS-155	Subarti Nurhasan, Oce Wirawan	Body Fat Percentage of Fitness Member in Yogyakarta
13	ABS-172	Jutri Dayanti, Sumaryanto	The Influence of Physical Fitness Gymnastics (SKJ) 2017 and Indonesian Jaya Gymnastics (SIJ) Against Flexibility, and Endurance
14	ABS-174	Fiardi, Tomolivus	Management of Physical Education Facilities and Infrastructures in Elementary Schools in Bengkulu City
15	ABS-2	Fitriani, Rahmawati	The Development of Authentic Assessment Rubric: A Solution for Educational Assessment
			Studi Fenomenologi Tradisional Treatment Urolithiasis Ethnic Murni using Transcultural Nursing

No	Kode Abstrak	Names of Authors	Title
1	ABS-21	Lita Heni Kusumawardani, Desyanti Nani Sulstiani	Improving Gross Motoric Skill Development through Montessori Method on Children Ages 3-5 Years
2	ABS-36	Budharjo ¹ , Bagoes Widjanarko ² , Priyadi Nugraha Prabunukti ²	Factors that Influence Womens Adolescent Behavior in Examination of BSE in The Detection of Breast Cancer in H. Soewondo Kendal Hospital
3	ABS-38	Novia Nazirun	Factors Associated With Low Birth Weight Genesis (LBW) at Arlin Achmad Pekanbaru 2015
4	ABS-54	Nana Condro ¹ , Wasiat ¹ , Bagoes Widjanarko ² , Laksono Widagdo ²	The Factors that Affect on Exclusive Breastfeeding Practices by Healthcare Workers at The Semarang District Hospital
5	ABS-70	Syamsulhuda Budi Mustofa, Fardi Aguslybana, Rani Tyas Budiyanti, Martini, Ayun Sritani, Nikie Astoria Yulia Dewanti, Nurhasnadar Nandini	Utilization of Maternal and Children Health Handbook as Information Sources for Immunization in Temanggung District
6	ABS-71	Nia Sri Ramania, Maria Inmaculata Iwo, Samsul Bahr, Muhammad Fahmi Hasan, Sugih Gunawan	Analysis of Physical Activities and Fitness Level of Lecturer and Staff in ITB
7	ABS-72	Md. Annimul Haque, PHD: Sawkia Afroz	Perceived Sexual and Reproductive Health needs and Barriers to service Utilization among Married Female Adolescents in Selected rural areas of Bangladesh
8	ABS-81	Elia Nur Ayuini, Hadi Pratomo	Effectiveness of A Combination of Lactation Management and Kangaroo Mother Care (Kmc) Training to Midwives in Boyolali
9	ABS-93	Angela Sima Narsiswari, Galuh Nawang Prawesti, Richard Husada, Dega Albrhan Setiadi, Lanny Hartanti	Association of Health Literacy to Patients' Demography in Urban and Rural Locations
10	ABS-106	Aditya Pandu Widiatmoko, Made Sumartwati, Agis Taufik	The Effect of Health Education through Audio Visual on Women Childbearing Ages Knowledge and Attitude About Prevention of Breast Cancer in Health Centre I Sunhang
11	ABS-	Yustiana Olih, AA Subyanto,	Knowledge and Participation of

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 Time : 12:40-16:00
 Moderator :

204	Sapia Arantayu, Mahendra Wijaya	Village and City Communities Preventing Childrens Sexual Violence
12	ABS-212 Siti Masfiah, Arrum Firda, Arif Kurniawan	Situational Analysis of Facility-Based Support for Diabetes Mellitus Prevention Program in Rural Community in Banyumas District
13	ABS-224 Devi Octaviana, Sivi Pranamata Mars Wijayanti	Community Perception to Risk of Dengue Infection and Treatment Seeking Behaviour : A Qualitative Study in Banyumas Regency, Indonesia
14	ABS-141 Suryanto, Dardjito, E, Heryanto, Ekamnglyas W	Motivation, Soft Skill and Student Interest in Entrepreneurship at the Jenderal Soedirman University in Purwokerto
15	ABS-1 Harwati, Mubarak, Rahmawati	The Effectiveness of Okra Fruit (Abelmoschus Esculentus) on Fasting Blood Sugar and Total Cholesterol Level in Type 2 DM
16	ABS-50 Harwati, Laode Alifarkhi, Popy Asmyanti	Relationship between the Role of Parents toward the Impact of Hospitalization on Children in RSUD Kota Kendari

No	Kode	Names of Authors	Title
1	ABS-17	Talha Bin Ennan , Jewel Mallick, Md. Zia Uddin, Mycal Dutta and Md. Atiar Rahman	Sedative, anxiolytic, antinociceptive, anti-inflammatory and anipyretic effects of a chloroform extract from the leaves of <i>Urena sinuata</i> (Borss) L. in rodents
2	ABS-44	Warsinah and Hanif Nasiatul Baroroh	Isolation of Compounds Agents Anti Bacteria from <i>Bandotan</i> (<i>Ageratum conyzoides</i> L.) Plants Using Bioassay Guided Fractionation Method
3	ABS-118	Tuti Sri Sulisti, Eka prasasti	Drug Release Study of Pharmaceutical Product
4	ABS-128	Eka Prasasti Nur Rachmani, Hanif Nasiatul Baroroh, Rehana, Tri Fatmawati	Antioxidant Activity Total Phenolic Content of <i>Slatri</i> (<i>Calophyllum Soulattri</i>) Leaf Extract
5	ABS-221	Muhammad Salman Fareza, Unang Supratanan	Cytotoxic Aromadendrane type-sesquiterpenoid from Stem Bark of <i>Chisocheton microcarpus</i> (Meliaceae)
6	ABS-231	Nia Kurnia Sholihah, Anna Rizky Sri Pramesiti	Patient satisfaction on pharmacy service in community setting in Indonesia: A systematic review
7	ABS-131	Firsler Nugroho, Iskandar Sobri, Henry Ekowati	Protective Effect of <i>Nigella Sativa</i> Against 7,12 Dimethylbenz [a] Anthracene (DMBA) Induced Colon Carcinogenesis in Rats
8	ABS-37	Raja Adi Aiman RMM, Shaharuddin MS and Zaenal Abidin	Nitrate in groundwater and related health risk: A case study in a village in Bachok district, Kelantan, Malaysia
9	ABS-49	Ekawati, Yuliani Setyaningsih, Ida Walyuni	Analysis of Work Posture and Work Station in Metal Coating Worker at Talang, Tegal
10	ABS-73	Md. Aminul Haque, PhD, Sawkia Afroz	Health care Seeking Behavior among Migrants Vulnerable to Climate Change: Study of a Slum in Dhaka City
11	ABS-75	Sulistiyani Sulistiyani Ayu Tri Darmawati, Onny Setiani	Correlation Between Local-Specific Traditions of Women Agricultural Workers And The Incidence of Low Birth Weight (BBLR) in South Metro Sub-District, Metro City, Lampung Province
12	ABS-188	Nanang Mubajir, Rachmah Laksmi Ambaradini	The Effectiveness of Aerobic Exercise For College Students' Concentration
13	ABS-	Adiwo Nugroho, Djoko Pektik	The Analysis of Male Teenagers'

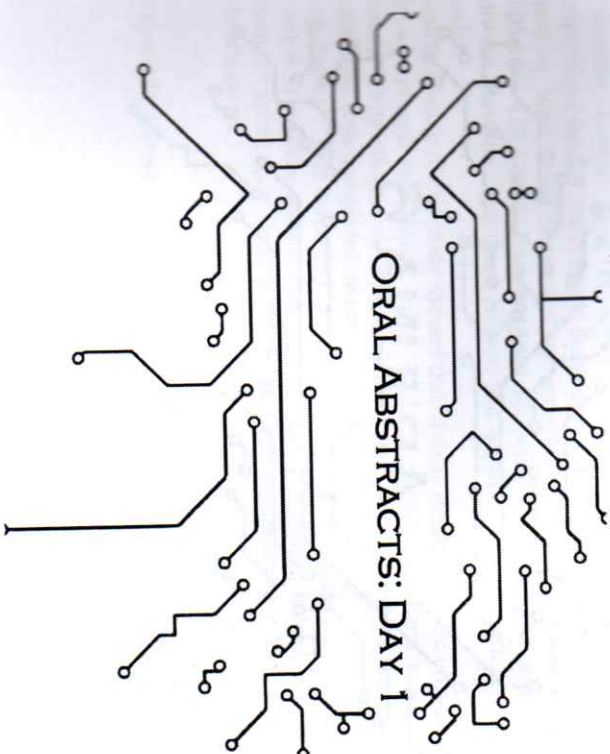
SCHEDULE OF POSTER PRESENTATION
Second Day (18 July 2019)

Day/Date : Thursday/18 July 2019
 Room : Ballroom

189	Irianto	Physical Activity
14	Slamet Turuh, Mekar Dwi Anggraeni, Nina Setiawati	The Effect of GAPIN (Gadget Pinar Application about Prenatal Sex of Knowledge and Attitude of Adolescent in Senior High School
15	Alvatul Aeni, Atyanti Isworo, Arif Setyo Upoyo	Relationship between Self-Awareness and Adherence of Hypertension Therapy toward Elderly with Hypertension in Puskesmas Purwokerto Uliara 2

No	Kode Abstrak	Names of Authors	Title
1	ABS-23	KARINA Komala*, Rianto Setiabudy, Ali Sumpkar, JERRY V. Manlapaz, Giama Victoria H. Ganotisi, Armand Sebastian III D. Del Rosario, Jini C. Dela Cruz, Afrine A. Dioquino, Kristine Nicole L. Eclevia, Christine Joy V. Enderex, Maria Kristen L. Ferrer, Samantha Ysabelle L. Ginezex	Synergistic Effects of Coenzyme Q10 and Other Antioxidants Level of Knowledge, Attitude, and Practices on Leptospirosis Among Residents in a Selected Community in Quezon City, Philippines
2	ABS-47	Siti MULLIDAH: Asriir, Walim	The Impact Of Diabetes Mellitus Gym For Controlling The Level Of Blood Glucose (HbA1c)
3	ABS-57	Izka Sofiyva Wahyuni; Saryono; Aikah Proverawati	Physical Activity and Screen Time, are Associated with Measures of Nutritional Status in Adolescents
4	ABS-65	INDAH Setyowati (1), Dian Susmarini (2), Eni Rahmawati (3)	Ffect Of Audio Visual Media Bonding Attachment On Knowledge And Skills Of Lbw Baby In RSUD DR. Soediman Kebunren
5	ABS-98	RAHMAWATI Nur Jannah, Mekar Dwi Anggraeni, Nina Setiawati	The Effect Of Health Education Through Audio Visual Media On Adolescents Knowledge And Attitude About Prevention Of Teenage Pregnancy In Health Centre I Chongok
6	ABS-101	Heri FIRMANSAH, Arif Setyo Upoyo, Ridiwan Kamaluddin	The Effect Of Acoustic Guitar Music On Blood Pressure Of Primary Hypertension Patents In Banjarsari Wetan Village
7	ABS-103	RIDHO Trisnantuningsih, Ascp Iskandar, Koernia Nanda Pratama	Counseling Effect On The Improvement Of Knowledge And Attitude Pra Elderly About Hypertension In Community Health Center Pungehlan I
8	ABS-105	Mohamad ROMLI (a), Lutfatul Latifah (b), Aprilia Kartikasari (c)	Factors That Influence Behavior The Examination Of Visual Inspection With Acetic Acid On Eligible Women Couple Of Indonesian Health Card Owners At Purboinggo Health Centre
9	ABS-109		

10	ABS-121	IEFAH Humriah, Dian Susmantri, Mervita Dewi Purnamasari	Nesting Effect Of Body Temperature For Use In Premature Infants In Soedihman Hospital Kebumen
11	ABS-123	BANGUN Sasonoko, Sidik Awaludin, Arif Inam Hidayat	The Effect of Combination Natri Bicarbonate and Listerine® to Oral Hygiene Toward Ventila Associated Pneumonia Incidence Jakarta Pusat Orak Nasional Hospital
12	ABS-125	MEKAR Dwi Anegraeni(1)*, Rahmi Setyani(1), Aprilia Kartikasari(1), Eni Rahmawati(1)	Exploring Early Supplemental For Practice, Does It Affect Stunting Indonesia?
13	ABS-126	1)Suryoputri, MASITA W.; 2)Wahyono, Djoko; 3)Sukarno, Ristantio	Evaluation of valproic acid dose use in epilepsy child patients at rsup d Sardito yogyakarta
14	ABS-144	Marselina MOLE, Mekar Dwi Anegraeni, Annas Sunneru	The Relationship Between Level Knowledge About Vukva Hygiene And The Abstinance During Childbirth With The Long Healing O Postpartum Maternal Perineal Wound
15	ABS-145	BERNADETH Yulhasari, Arif Setyo Upoyo, Arif Inam Hidayat	Effectiveness Of Cold Compress An Guided Imagery Of Postoperative Sore Throat (POST) AT RSUD Cikcap
16	ABS-198	GETRUDIS Wilhelmina, Iskandar, Endang Triyanto	Relationship Between Parents Communication Patterns With Youth Attitudes About Physical Change During Puberty Period In Eight Grade Of Junior High School
17	ABS-208	NIKO Sutrisno(a), Keksi Girindra Swasti(b), Wastu Adi Mulyono(c)	Description Of Knowledge, Perception And Nursing Attitude About The Implementation Of Patient Nursing In Rsd Argawinangun
18	ABS-220	RANI AUJIA Inman (a*), Ayeng Dian Purnamasari (b)	Tree Climbing Postures Analysis of Palm Sugar Farmer
19	ABS-196	AITT Prasetya Maharani (a), Rahmi Setyani (b*), Endang Triyanto (b)	Sexuality in Later Life: A Descriptive Study of Sexual Desire, Expression and Satisfaction
20	ABS-99	Luisi Raijuni Pasaribu	Risk Factors to Gonorrhoea among Female Sex Workers in Three Cities in Indonesia



Radioiodine for Breast Cancer Therapy : A pilot Project in SKBR-3 Cell Line

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Abstract

Background: Radioiodine has been known as an adjuvant therapy for thyroid cancer. Beside thyroid, radioiodine is taken up by breast tissue. So, radioiodine is expected can be as an alternative for breast cancer therapy. The aim of this study was to analyze uptake and toxicity of radioiodine in the SKBR-3 cell line. **Material and Method:** This study used SKBR-3 cell line that represent a HER2 type of breast cancer. Cells were planted in DMEM medium added 10% fetal bovine serum (FBS), penstrep 1% and amphotericin B. Cells were grown until 80% confluent and then stripped. Subsequently the cells were sub-cultured on plates 12 and 6 wells respectively for measured uptake and toxicity of radioiodine. Radioiodine uptake was calculated by sum efflux of 125 Iodine (125I) and the amount of uptake after the addition of 95% ethanol. Radioiodine toxicity was measured by calculated the 131Iodine (131I) effect to cell proliferation using clonogenic assay. **Results:** Radioiodine was taken up by SKBR3 cells and the average of uptake was 194 ± 50 cpm/106 cell. Radioiodine showed reducing of cell proliferation. The average cell proliferation after 131I exposure was $47 \pm 6\%$. **Conclusion:** Radioiodine is taken by SKBR3 cells and it demonstrate the toxicity to the cell. Our finding shows an opportunity for radioiodine as an alternative for breast cancer therapy. Further study is need to understand the mechanism.

Keywords: Radioiodine, SKBR3 cell line, breast cancer

Effect of Propoxur to The Level Of Estradiol and Estradiol Receptor in Rat

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Department of Biology, Faculty of Medicine, Universitas Andalas

Abstract

Propoxur is classified as bad actor because of its high toxicity. If inhaled or absorbed the body can obscure vision, excessive sweating, dizziness, headache, and weak body. Propoxur also decreases the activity of enzymes that play a role in nerve transmission. If and adversely affects the liver and reproduction. Propoxur is a middle class poison. Inhaled or absorbed by the human body can obscure vision, excessive sweating, dizziness, headache, and weak body. Propoxur can also reduce enzyme activity which plays a role in nerve transmission, and adversely affects the liver and reproduction. Study aimed to determine the effect of propoxur exposure toward estradiol level and estradiol receptors in *Rattus norvegicus* female. The experimental rats were divided into 4 groups, namely: the first group of control groups as many as 8 groups were not given treatment, the second group was the treatment group (P1) this group was given propoxur 1 spray for 30 minutes, the third group (P2) this group was given propoxur 2 spray for 60 minutes, and the third group (P3) is given propoxur 3 times the spray for 90 minutes, the estrus cycle is examined every time estrus. Collection of serum and ELISA examination on hormone levels of estradiol and its receptors. Results showed there were significant differences between the control group and the treatment group exposed to Propoxur for 30 minutes (19.5869 ± 4.9731), 60 minutes (20.0920 ± 5.7529), and 90 minutes (25.8703 ± 4.0753). There was a long-standing effect of Propoxur toward Estradiol hormone ($p = 0.000$). There were also significant differences of estradiol receptor ($p = 0.008$) between the control group and the treatment group exposed to Propoxur for 30 minutes (1.8489 ± 0.9017), 60 minutes (2.3844 ± 1.4296), and 90 minutes (3.1634 ± 0.9936). Based on statistical tests, it concluded that there is a long-standing effect of Propoxur. The longer exposure to Propoxur the higher the level of estradiol receptors.

Keywords: propoxur, estradiol hormone and estradiol receptor

Radioiodine for Breast Cancer Therapy: A pilot Project in SKBR-3 Cell Line

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Abstract.

Background: Radioiodine has been known as an adjuvant therapy for thyroid cancer. Beside thyroid, radioiodine is taken up by breast tissue. So, radioiodine is expected can be as an alternative for breast cancer therapy. The aim of this study was to analyze uptake and toxicity of radioiodine in the SKBR-3 cell line.

Material and Method: This study used SKBR-3 cell line that represent a HER2 type of breast cancer. Cells were planted in DMEM medium added 10% fetal bovine serum (FBS), panstrep 1% and amphotericin B. Cells were grown until 80% confluent and then stripped. Subsequently the cells were sub-cultured on plates 12 and 6 wells respectively for measured uptake and toxicity of radioiodine. Radioiodine uptake was calculated by sum efflux of ¹²⁵Iodine (¹²⁵I) and the amount of uptake after the addition of 95% ethanol. Radioiodine toxicity was measured by calculated the ¹³¹Iodine (¹³¹I) effect to cell proliferation using clonogenic assay.

Results: Radioiodine was taken up by SKBR3 cells and the average of uptake was 194 ± 50 cpm/ 10^6 cell. Radioiodine showed reducing of cell proliferation. The average cell proliferation after ¹³¹I exposure was $54 \pm 5\%$.

Conclusion: Radioiodine is taken by SKBR3 cells and it demonstrate the toxicity to the cell. Our finding shows an opportunity for radioiodine as an alternative for breast cancer therapy. Further study is need to understand the mechanism.

Keywords: Radioiodine, SKBR3 cell line, breast cancer

Introduction

Breast cancer is the most cancer in women. According to the World Health Organization, around 8-9% of women have breast cancer risk. New cases are reported more than 250,000 in Europe, and not less than 175,000 in the United States annually. Based on the Hospital Information System (SIRS), breast cancer was the highest in the number of hospitalized patients in 2006 (19.64%), and in 2007 reached 21.69% [1].

Treatment of breast cancer consists of surgery followed by adjuvant therapy such as hormone therapy, radiation, chemotherapy and immunotherapy. The cost of adjuvant therapy, especially chemotherapy and immunotherapy can reach hundreds of millions [2]. The financing of the treatment of breast cancer that continues to increase creates significant financial problems for patients and their families.

The type of adjuvant therapy is determined by the molecular types of breast cancer. Each molecular type of breast cancer has a different prognosis and response to chemotherapy. The HER2+ type is a group which is

sensitive to chemotherapy but has limited response to the therapy. It has a worse prognosis than the luminal group [3,4]. Other adjuvant therapies are needed to increase the disease-free period and life expectancy for breast cancer patients, especially in the HER2+ type. The ideal cancer adjuvant therapy, which is selective in target cells with minimal side effects and low prices, will make a very significant contribution to the management of breast cancer.

Radioiodine has been used for more than 60 years as adjuvant therapy for thyroid cancer and has become an integrated part of its management [5]. The therapy has increased the disease-free period and life expectancy in thyroid cancer patients with recurrent or metastatic cases. The ability of the thyroid gland to capture and maintain iodide in cells is the basis for the use of radioiodine for the diagnosis and treatment of thyroid cancer [6]. Radioiodine taken up by thyroid cells through an active transport mechanism involving membrane proteins known as Sodium/Iodide Symporters (NIS) as co-transporter. Sodium/Iodide Symporter carries two sodium ions (Na^+) and one iodide ion (I^-) against the

high iodide concentration gradient from the outside into the cell which is maintained by Na^+/K^+ -ATPase pump [7,8]. SKBR3 is a HER2 type of cell line. It expresses NIS [9]. The purpose of this study is to analyze the uptake and toxic effect of radioiodine in SKBR3 cell line.

Methods

This experimental study used SKBR-3 cell line. The study was conducted at the cell culture Laboratory of Radioisotope and Radiopharmaceutical Technology (PTRR) of National Nuclear Body of Indonesia. SKBR-3 cell line from ATCC (American Type Culture Collection). Radioiodine. Radioiodine ^{125}I was used to measure the uptake and ^{131}I was used to measure the toxicity.

Cell Culture

Cells were planted on 25 cm^3 flask in DMEM medium, added 10% fetal bovine serum (FBS), penicillin 1% and amphotericin B. Cells were grown until 80% confluent and then stripped. Subsequently the cells were sub-cultured on plates 12 and 6 well for measured uptake and toxicity of radioiodine.

Measurement of Radioactive Iodine catches

Measurements of radioiodine uptake were carried out by modification of methods by Knostnam [10]. Cells were planted on 12 culture plates, 200,000 cell/well for 24 hours. Each well added $2\mu\text{C}$ ^{125}I in (Hanks' balance salt solution) HBSS + 10mM HEPES (PH 7.3) and incubated at 37 $^\circ\text{C}$, CO_2 level 5 % for one hour. Then, the cells were trypsinized and distributed in 1 ml (10^6 cell)/tube. Efflux was counted every 15 minutes until 1 hour and followed by incubation in 1 ml of 95% ethanol at room temperature for 20 minutes to release intracellular radioactive iodine. The uptake was calculated by sum of efflux calculations and the amount of uptake after the addition of 95% ethanol. The relative uptake was calculated by comparing the count on the supernatant that was induced to control counts. The studies were carried out three times repeated in two separate experiments.

Toxic effect

The toxic effect was assessed by clonogenic Assay. Clonogenic examination refers to the procedure performed by Kogai et al [11]. Cells were planted on culture plates with 12 wells and wait until 80% confluent. Each well added $1\mu\text{C}$ ml of I-131 in HBSS + $10\mu\text{M}$ NaI + 10mM HEPES (PH 7.3). In the control group only HEPES + 10MM was given (PH 7.3), then the cells were incubated at 37 $^\circ\text{C}$, with CO_2 levels of 5% for 7 hours. After the incubation period was complete,

the cells were quickly washed with cold HBSS and were thinned with 0.05% trypsin EDTA. The cells were replanted on a well 6 culture plate with a number of 1000 cells / well. After ten days, the cells were washed with PBS, fixed and stained with a mixture of 0.5% crystal violet in 50/50 methanol / water for 30 minutes. Then the cell is washed with water and dry in room temperature. The next day a number of colonies were counted which were visible to the well treated and the results were compared to the colonies formed in well controls that were not given radioactive iodine.

Statistical Analysis

Data analyzed by statistic with t-test difference two group, and using ANOVA for more than two group with significance level $p < 0.05$.

Results and discussions

The confluent cells were incubated with radioiodine for uptake and toxic effect analysis as shown in figure 1. The mean of radioiodine uptake was 194 ± 50 cpm/ 10^6 cell cells and control $27,6 \pm 30,2$ cpm/ 10^6 cells, as shown in figure 2. Toxicity of radioiodine was measured cell proliferation. The average cell proliferation after ^{131}I exposure was $47 \pm 6\%$.

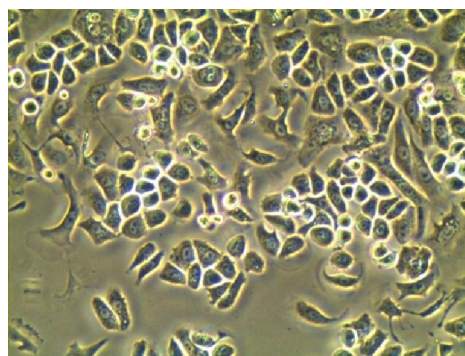


Figure 1. SKBR-3 cell culture results with confluent 80%.

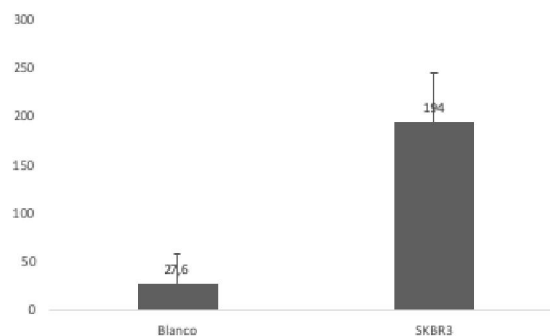


Figure 2: The average radioiodine uptake, by SKBR-3 cell compare to blanco was significant different, $p < 0,001$ ($p < 0,005$).

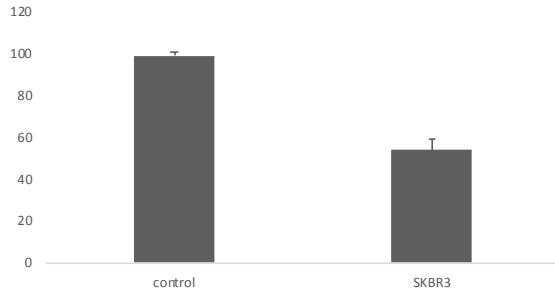


Figure 3: Cell proliferation of SKBR3 cell after radioiodine was $0,54 \pm 0,05$ and control $0,99 \pm 0,02$, with $p = 0,005$

Thyroid cancer is a common endocrine malignancy with relatively good prognosis. Radioactive iodine (RAI) is considered effective for patients with total or nearly total thyroidectomy [12]. In research Gopal et al, radioiodine has been the best choice of treatment for differentiated thyroid cancer. Loss of the ability to concentrate iodide makes thyroid cancer cells refractory to radioiodine therapy. Therefore, the methods that enhance the uptake of radioiodine may have significant therapeutic effect [13].

Elliyanti et al study reported that, SKBR3 cells uptake is found to be significantly higher (1765 ± 44 kcpm) when compared with both MCF-7 and HaCaT cells at $p < 0.05$ [9]. An insignificant difference was found in radioiodine uptake between MCF-7 and HaCaT cells. Our study also found that SKBR3 cell taken up radioiodine and the exposure reduced cell proliferation after more than 50% (figure 2). A high uptake of radioiodine by the cells is needed to reach the optimal effects of treatment [9].

Conclusions

Radioiodine is taken by SKBR3 cells and it demonstrate the toxicity to the cell. Our finding shows an opportunity for radioiodine as an alternative for breast cancer therapy. Further study is need to understand the mechanism.

The subject in this research is cell line, authors did not have any contact to human or animal as subjects.

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