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Conference Abstract Book

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ASEAN CANCER REGISTRY FORUM 2018
Regional Cooperation for Cancer Registration: Priorities and Challenges
19-21 March 2018
Tawana Hotel, Bangkok, Thailand

19 March 2018 (Tentative)

Theme: Global, Regional and National Cancer Surveillance	
07.00 - 08.30	Registration
08.30 - 09.00	Opening
09.00 - 09.30	Dr. Freddie Bray The Global Burden of Cancer International Agency for Research on Cancer, Lyon, France
09.30 – 10.00	Coffee break
	Chair: Dr. Freddie Bray
10.00 -10.25	Mr. Les Mery
	The Global Initiative for Cancer Registry Development
	International Agency for Research on Cancer, Lyon, France
10.25 - 10.50	Dr. Young Joo Won
	Cancer registries and cancer control policy
	National Cancer Centre, Seoul, Korea
10.50-11.15	Dr. David Roder
	The use of cancer registries in cancer control
	University of South Australia, Adelaide, Australia
11.15 - 11.40	Dr. Ann Chao
	Use of cancer registry data to inform policy and research
	US National Cancer Institute, Washington DC, USA
11.40 – 12.00	Dr. Alireza Mosavi Jarrahi
	Evaluation of completeness of quality of cancver registry in low resaurece communities: application of capture recapture method
	Medical School, Shahid Beheshti University of Medical Sciences, Tehran, Iran
12.00 - 14.00	Lunch and Poster Session
	Chair: Mr. Les Mery
14.00 –14.25	Dr. Rajesh Dikshit
	Measuring cancer survival in Asia
	Tata Memorial Centre, Mumbai, India
14.25-14.50	Dr. Miranda Fidler
	SURVCAN-3: building registry capacity and benchmarking survival
	US CDC, Atlanta, USA
14.50-15.15	Dr. Isabelle Soerjomataram
	Evidence for cancer prevention: Data and action
15.15-15.40	Dr. Annalisa Trama
	The burden of rare cancers in Europe. What about in Asia? A proposal for a collaborative study
	Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy
15.40 – 17.00	Chair: Surapon Wiangnon
	Free paper session

March 20, 2018 (Tentative)

Theme: Building Capacity in Asia: current activities	
09.00 - 09:20	Drs. Malcolm Moore and Freddie Bray Developing an Asian Cancer Registry Network: Past lessons, current activities and a vision for the future
09.20 - 09.40	Dr. Rajesh Dikshit IARC-GICR Mumbai Hub: building capacity in Southern Asia Tata Memorial Centre, Mumbai, India
09.40 - 10.00	Dr. Suleeporn Sangrajrang IARC-GICR Thailand Collaborating Centre: building capacity in ASEAN countries National Cancer Institute, Bangkok, Thailand.
10.00 - 10.30	Coffee break
10.30 - 10.50	Dr. Tomohiro Matsuda IARC-GICR Japan Collaborating Centre: the e-ASIA Joint Research Program (e-ASIA JRP) National Cancer Centre, Tokyo, Japan
10.50 - 11.10	Dr. Wanqing Chen IARC-GICR China Collaborating Centre: National Program of Cancer Registries in China National Cancer Centre, Beijing, China
11.10 - 11.30	Dr.Young Joo Won IARC-GICR Korea Collaborating Centre: registry activities in the Republic of Korea National Cancer Centre, Seoul, Korea
11.30 - 12.00	Discussion
12.00 - 14.00	Lunch and Poster Session
14.00 - 16.00	Status and activities of cancer registries in Asean/Asian countries Chair: Suleeporn Sangrajrang Dr. Daphne Teck Ching Lai The development and achievement of population based cancer registry in Brunei Darussalam Universiti Brunei Darussalam Dr Azizah Ab Manan The Malaysian National Cancer Registry- The Way Forward National Cancer Institute, Putrajaya, Malaysia Dr. Kaung Myat Shwe Implementation the development of population based cancer registries Nay Pyi Taw General Hospital, Nay Pyi Taw, Myanmar Dr. Evlina Suzanna The journey of Passion: First result of Indonesia National Cancer Registry Dharmais National Cancer Hospital, Jakarta, Indonesia Dr. Bui Duc Tung TBA Ho Chi Minh Oncological Hospital, Ho Chi Minh City, Vietnam Assoc Prof. Dr. Tran Thanh Huong TBA National Cancer Institute, Hanoi, Vietnam Dr Maria Rica Lumague Current Status of Cancer Registration in the Phillipines DOH-RizalCancer Registry at Rizal Medical Center, Pasig City, Philippines

March 21, 2018 (Tentative)

Theme: National Cancer Surveillance	
9.00 – 9.25	Chair: Dr.Tomohiro Matsuda Dr. David Roder Cancer registration in Oceania University of South Australia, Adelaide, Australia
9.25 – 9.50	Dr. Betsy Kohler Role of NAACCR in North America (VDO Presentation)
9.50-10.15	Dr. Ann Chao US-NCI cancer surveillance activities in Asia US National Cancer Institute, Washington DC, USA
10.15-10.45	Coffee break
10.45-11.45	Asian Cancer Registry Network - Panel discussion: speakers from yesterday (Chairs: Dr Freddie Bray and Mr. Les Mery) • Governance • Key Activities • Timelines
11.45 - 12.00	**Closing ceremony**

The Global Initiative for Cancer Registry Development (GICR)

Les Mery[1], Piñeros M, Znaor A, Bray F

[1]The Global Initiative for Cancer Registry Development, International Agency for Research on Cancer, Lyon, France.

Abstract: High quality cancer data is lacking in many parts of the world. In response, the Global Initiative for Cancer Registry Development (GICR) has been launched to improve the coverage, quality and accelerate the availability of population-based cancer registries. The presentation will focus on the progress of the GICR to demonstrate how activities relate to strengthening cancer control worldwide. IARC Regional Hubs for Cancer Registration are to provide localized programmes in training, support and advocacy. The concept of the Hub model is to develop a connected system arranged to link country-level needs with regional support mechanisms. Four Hubs are operational: a Regional Hub for South, East, and South-Eastern Asia, a Regional Network Hub for Sub-Saharan Africa in collaboration with the African Cancer Registry Network; a Regional Hub for North Africa, Central and West Asia; and a Regional Network Hub for Latin America. Two additional Hubs in the Pacific Islands and in the Caribbean are being implemented. Since the launch of the GICR at the World Cancer Leaders' Summit in November 2011, site visits to 78 countries have been conducted to assess opportunities to improve their level of cancer registration. 17 new agreements between IARC and countries have been signed, with several others in development. Training as a core component has resulted in 59 GICR-led or affiliated courses. An IARC Technical Publication has been produced in English, French and Spanish as a reference for health planners in LMICs (Bray, 2014), with the further development of support tools, regional databases and reports underway. A key focus of the GICR is to support the development of trained staff in population-based cancer registries and to increase the quality of cancer data. New opportunities in cancer control planning and in building cancer research capacity are being established through the GICR.

Cancer Registries and Cancer Control Policy

Young-Joo Won

Division of Cancer Registration and Surveillance, National Cancer Center, Korea.

Abstract: Cancer registries play a critical role in the development and implementation of health policy. Rational planning is very difficult without a means of identifying the main health problems, determining priorities for preventive and curative programs, evaluating whether goals are reached in the target groups, and determining what has been achieved in relation to resources expended. A long-term goal of any comprehensive cancer control program is to reduce cancer incidence and mortality and improve quality of life. Cancer registries should therefore provide data on a continuous basis regarding the incidence, prevalence, mortality, methods of diagnosis, stage distribution, treatment patterns, and survival. Korea is establishing and implementing a comprehensive plan for cancer control. The 1st Cancer Control Plan was established in 1996 as part of a nationwide effort to fight cancer. The goal of the plan was to lower cancer incidence and mortality rates among Korean and to improve the quality of life of patients with cancer by promoting research, highlighting the importance of cancer treatment, supporting national cancer control programs, and by enforcing professional training and education regarding cancer treatment. As a result of this systemic cancer control policy, the age-standardized cancer incidence rates have decreased since 2012 and mortality rates have declined since 2002. In addition, the 5-year survival rates improved remarkably from 1993–1995 to 2011–2015 in Korea. This information can be used to help plan cancer services and identify where further progress is needed in order to improve the lives of all Koreans affected by cancer. In addition, this information will also play a crucial role in formulating the cancer control plan and policy, as well as in monitoring its success.

The Use of Cancer Registries in Cancer Control

David Roder

Division of Cancer Registration and Surveillance, National Cancer Center, Korea.

Abstract: Population-based cancer registries have an essential role to play in cancer control planning from primary prevention through to screening, treatment, support and end-of-life care. Registries enable the monitoring of service delivery along the cancer control pathway and informed service responses to cancer-control gaps. Registries exist for monitoring incidence, mortality and survival, but cancer stage, other prognostic indicators and biomarkers are often lacking to interpret treatment patterns and survival. R&D projects have recorded stage and related indicators on registries in Australia to investigate effects of screening and treatment. Structured (synoptic) reporting of pathology have been used to gain these indicators and exploratory projects have also used imaging reporting for this purpose. Data linkage units can link cancer registry data to administrative data on HPV vaccination, screening, co-morbidity and treatment. This greatly increases the data available for cancer surveillance and control. Clinical registries, where they exist, provide additional in-depth data and add value through linkage to bio-specimen data for translational laboratory-to-clinic research. Data from large population cohorts and surveys can be linked to cancer registry data to monitor risk behaviors such as tobacco smoking, lack of exercise, poor diet, and high-risk alcohol consumption, and to explore their impact on cancer. Through the use of linked cancer registry and administrative data, the evidence base can be greatly increased for cancer control from primary prevention to end-of-life care.

Use of Cancer Registry Data to Inform Policy and Research

Ann Chao

US National Cancer Institute, Washington DC, USA.

Abstract: Accurate and timely reporting of data from cancer registries, as an integral component of health surveillance systems, is needed to inform cancer control policy and cancer research. Information about the cancer burden, disparities in the burden, and change in burden over time, can inform the planning, implementation, and evaluation of cancer control policies and services. Careful analysis of data from cancer registries enables the formulation of hypotheses about cancer etiology to guide further research, and enables evaluation and improvement of cancer prevention and control interventions. Timely analysis of cancer registry data is needed to inform areas for improvement in cancer registry operations and data quality; such analysis strengthens registry operations and increases usefulness of the data. This presentation will cover the importance of using cancer registry data with examples.

Evaluation of Completeness of Quality of Cancver Registry in Low Resaurece Communities: Application of Capture Recapture Method

Dr. Alireza Mosavi Jarrahi[1,2]

[1]Shaheed Beheshti University of Medical Sciences, Tehran, Iran.
[2]West Asia Organization for Cancer Prevention, Tehran, Iran.

Abstract: Accurate cancer incidence data are essential for planning, monitoring and evaluating national and regional cancer control programs. The purpose of population based cancer registries is to estimate the cancer burden in the area covered, to observe trends and regional differences and to provide a database for epidemiological research. Decision makers in health authorities need to know how reliable the data is on which they base their policies. Therefore, completeness of registration is used as one of the measures of quality of a cancer registry. Completeness is defined as the proportion of incident cancer cases that is registered. Completeness level of cancer registration is one of the main parts of quality control in such registration. In the literature, several methods are described to evaluate completeness, which are divided in two categories: qualitative methods and quantitative methods. The qualitative methods used were Mortality/Incidence ratios and the proportion of microscopically verified cases and, among quantitative methods, the ones applied were the capture recapture, the death certificates and M:I ratios method and the flow method. Since most cancer registries employ more than one data source for case finding, capture-recapture methods may be used to estimate the number of incident cases in the population and hence to assess completeness of case ascertainment. Capture-recapture is the method widely used in cancer registry in order to evaluate completeness, in this presentation many aspect of capture recapture will be discussed and their application in cancer registry will be evaluated.

Survcan-3: Building Registry Capacity and Benchmarking Survival

Miranda M Fidler[1], Isabelle Soerjomataram[1], Rajaraman Swaminathan, Aude Bardot, Adalberto Miranda-Filho, Rama Ranganathan, Rajesh Dikshit[2], Freddie Bray[1]

[1]International Agency for Research on Cancer, Lyon, France. [2]Tata Memorial Centre, Mumbai, India.

Abstract: Cancer survival is a key indicator of the effectiveness of cancer services and is a measure of prognosis that can reflect the prospects of clinical cure. However, survival studies remain sparse in many transitioning countries due in large part to the absence of complete or accurate national mortality information systems. Thus, to ensure the continued development of cancer survival statistics for benchmarking purposes in transitioning countries, and to support registries in developing their own capacity to collect and analyze such data, the SURVCAN-3 project was launched. The project maintains the same principles as the first two volumes and includes all cancer diagnoses between 1 January 2006 and 31 December 2012 with a minimal follow-up of 2 years. All registries whose incidence data were accepted into CI5 IX or X are eligible to participate. Other registries are also eligible, provided their data quality indices are satisfactory for at least some cancer sites or part of the diagnosis period. Ultimately, 1-, 3-, and 5-year crude and relative survival rates, conditional survival, and survival trends will be investigated. The call for data was released in September 2016 to over 80 cancer registries from 40 countries. As of February 2018, 86 cancer registries have agreed to participate in SURVCAN-3, of which 80 have sent initial data. Four cancer registries received financial assistance through a Collaborative Research Agreement (CRA) with IARC in order to submit preliminary data, and approximately 20-30 CRAs are expected for the entire project. Data quality checks and processing are currently being undertaken, and preliminary analyses and results will be presented.SURVCAN-3 seeks to provide systematic, comparative survival data from population-based cancer registries in countries under transition. The results provide a context in which to compare survival in these countries with those from more industrialized countries, whilst also investigating deficiencies in cancer registration, clinical follow-up, and delivery. Further, these findings will provide important information for public health authorities in order to ensure improved and equitable cancer care.

The Burden of Rare Cancers in Europe. What About in Asia? A Proposal For a Collaborative Study

Annalisa Trama, Riccardo Capocaccia, Gemma Gatta

Fondazione IRCCS Istituto Nazionale dei Tumori, Milan – Itali.

Abstract: Epidemiologic information on rare cancers is scarce. The project Surveillance of Rare Cancers in Europe (RARECARE) proposed a definition and a list of rare cancers. Rare cancers are those with an incidence < 6/100,000 and are defined as a combination of topography and morphology codes of the International classification of diseases for oncology. RARECARE estimated the burden of rare cancers in Europe for the period 1995-2002 and RARECAREnet updated them for the period 2000-2007. In Asia, to our knowledge, only Tamaki et al estimated the burden of rare cancers in Japan. RARECAREnet analysed data from 94 cancer registries for more than 2 million rare cancer diagnoses, to estimate European incidence and survival in 2000–07. Incidence was calculated as the number of new cases divided by the corresponding total person-years in the population. Five-year relative survival was calculated by the Ederer-2 method. To estimate the burden of rare cancers in Eastern and south Eastern Asia, we used data available in Globocan 2012. The RARECARE list includes 198 different rare cancers grouped in 12 main families. Rare cancers accounted for 24% of all cancers diagnosed in the EU during 2000–07 corresponding to 650,000 new diagnoses of rare cancers occur yearly in Europe. The 5-year relative survival for all rare cancers was 48·5%. However, incidence and survival were extremely heterogeneous across the 198 identified rare cancers and survival differences across EU countries were observed. In Eastern and south Eastern Asia the burden of rare cancers was 20% and 25%, respectively. RARECARE and RARECAREnet estimates of the rare cancer burden in Europe provided the indication of the size of the public health problem due to these diseases. In Asia, rare cancers seems not so rare too. However, rare cancers are defined by a combination of topography and morphology and Globocan do not provide such information. We could include in the analyses only a minority of rare cancers and therefore the results are most likely an underestimation of the real burden. Rare cancers are a specific group of rare diseases requiring, compared with other rare diseases, the largest expenditure for drugs and a different health care organization. The European Commission (EC) recognised the results of RARECARE and RARECAREnet and launched a European Joint Action for Rare Cancers in 2016 aiming to help member states with their national health plans. The EC also recently approved 3 specific rare cancer European Reference Networks (ERN), for childhood, haematological and solid cancers, to exchange management of very rare cancers or to treat patients from small countries. Our experience showed that data provided by cancer registries are essential, but their quality has to improve, especially on morphology definitions. Data on rare cancers for Asia are not available and we call for a collaborative study to estimate the burden of rare cancers in Asian countries to form the basis for a comparison with Europe and for discussing challenges and solutions for the health care organization.

Iarc-gicr Thailand Collaborating Centre: Building Capacity in Asean Countries

Suleeporn Sangrajrang[1], Rangsiya Buasom[1], Nisit Singhakosit[1], Krillika Suwanrangruang[2], Donsuk Pongnikorn[3], Surapol Wiangnon[2]

[1]National Cancer Institute, Bangkok, Thailand. [2]Khon Kaen University, Khon Kaen, Thailand. [3]Lampang Cancer Hospital, Lampang, Thailand.

Abstract: The first population-based cancer registry in Thailand started in 1986 in Chiang Mai, follow by Khon Kaen in 1988, Songkla and Bangkok in 1990. In collaboration with these four sites and with support from the International Agency for Research on

Cancer (IARC), the first volume of cancer incidence in Thailand was published in 1993. Soon after, a number of population-based cancer registries were established. The most recent volume of Cancer in Thailand 2010-2012 recruited data from 15 population-based cancer registries (36.8% coverage of population), including 389 hospital from all regions. Since 1997, the National Cancer Control Program was developed in collaboration with muti-stakeholders and has used cancer registries to identify priorities in public health. Therefore, activities based on the national plan focused on the top five cancers of the country. Cancer registries are also needed for monitoring and evaluating our cancer control strategies. The association of Southeast Asia Nations (ASEAN) is a regional intergovernmental organization comprising ten Southeast Asian countries - Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The number of population-based cancer registries in the ASEAN region is relatively low due to the limited resources in most countries. Close collaboration among ASEAN countries is needed to strengthening capacity building for cancer registration as well as for national cancer control programs. In collaboration with the IARC Mumbai HUB, we have conducted several training courses both within and outside of Thailand over the past five years. From 2013 more than eight courses have been delivered to train 450 people who involved in cancer registry data. In 2017, Thailand was selected as an IARC-GICR Collaborating Center for Southeast Asian countries, with the aim to provide support and sharing knowledge on cancer registration in the region. We continue commit to move forward together to create more population based cancer registries and improve the data quality. Many activities have been plan in the coming years.

Iarc-gicr Japan Collaborating Centre: The E-Asia Joint Research Program (E-Asia Jrp)

Tomohiro Matsuda, Kumiko Saika, Eiko Saito

National Cancer Centre, Tokyo, Japan.

Abstract: Few Asian countries have high quality population-based cancer registries that are fully utilized for cancer control. It is therefore uncertain as to whether or not the disparity in Asia reflects the true cancer risk difference. The e-ASIA Joint Research Program is aligned with the Global Initiative for Cancer Registry Development (GICR) based on the Collaborating Center in NCC Japan, and the Section of Cancer Surveillance of the IARC, will collaborate as a partner in the work. The project will result in advancing scientific knowledge on the scale and profile of the burden of cancer in Asia. Furthermore, skills will be transferred to registry staff in each participating country, the Philippines, Viet Nam and Cambodia, who in turn are expected to serve as a resource to provide greater capacity to conduct cancer research to support control programs. Throughout the training courses of the project, that will follow international standards based on "Cancer Registration: Principles and Methods", this project expects direct educational benefits to be obtained, which will form the basis for ongoing collaborations in Asia. This project has four major goals: 1) To conduct an assessment of cancer registration status and methods in order to develop training to standardize practices for the purpose of improved data quality and analytic reporting in the four participating countries. 2) To quantify the incidence and mortality of specific cancers in Asia and related risk factors, based on actual data or estimation according to availability. 3) To provide a thorough comparison of cancer statistics in the four counties to estimate the attributable cancer risks. 4) To support the development of registry activity via networks in Viet Nam and the Philippines and aid the redevelopment of a population-based cancer registry in Cambodia. The study will provide governments with reliable information to prioritize and monitor policy programs for cancer control. Patients will benefit from gaining greater awareness of prevention and treatment options for the selected cancers. The project also contributed to capacity-building and the creation of a network of Asian researchers engaged in cancer registry.

Iarc-gicr China Collaborating Centre: National Program of Cancer Registries in China

Wanqing Chen

National Cancer Centre, Beijing, China.

Abstract: Since national project of cancer registration and follow-up was initiated by National Health and Family Planning Commission (previous Ministry of Health) in 2008, population-based cancer registration, collecting cancer incident cases, cancer deaths and follow-up information has spread in 31 provinces all over the country. On the basis of existed cancer registries,52 counties or cities were selected to be new cancer registries following registry selection principle in 2008 covering all 31 provinces with population over 110 millions. In financial year of 2009, 54 cancer registries were established on the basis of work in previous year, covering 10% of national population. Infinancial year of 2010 and 2011, other extra 46 registries came into operation and total cancer registries were increased to 195 with more than 13% of population coverage. In 2014, the number of cancer registries expanded to 308 with population coverage of about 300 millions. At present, the number of cancer registries is increasing and the data quality is improving. The annual report has provided the basic data for making cancer control strategies, cancer research and clinical trials. Till now, the total number of cancer registries are more than 400, covered population over 340 millions. Cancer registration program is being headed by Bureau of Disease Prevention and Control, National Health and Family Planning Commission and enforced by NCCR under the support of public health authorities in every province. In order to enhance population based cancer follow-up and survival analysis, NCCR started to collect survival information in part of registries who have implemented follow-up. In 2014, a new fund was launched from National Project of Cancer Registration and Follow-up to support information collection in cancer registries. Training on follow-up and survival analysis were held by NCCR that would greatly promote population based cancer follow-up and cancer survival analysis. Till now, most of registries have implemented follow-up and it becomes the routine work. So far, population based cancer registry is playing an important role on cancer control in China.

Iarc-gicr Korea Collaborating Center: Registry Activities in the Republic of Korea

Young-Joo Won

Division of Cancer Registration and Surveillance, National Cancer Center, Korea.

Abstract: Korea started cancer registration with the help of the WHO in 1978 and has made several important developments to date. The in-depth advice, personnel training, and direct involvement of the IARC and the training on the third edition of the ICD-O and SEER summary staging by the National Cancer Institute, US have been deepened and expanded the Korea cancer registry. Currently, the National Cancer Center (NCC) of Korea is an ideal setting for an IARC-GICR Collaborating Center. Among several high-quality registries accepted in the IARC's Cancer Incidence in Five Continents publication, including the national Korea Central Cancer Registry (KCCR) that is managed by the NCC has a demonstrated record of expertise. Since its inception in 2005 as the WHO Collaborating Center for Cancer Registration, Prevention and Early Detection, the following countries have been working with the KCCR as part of its international network: Mongolia (2013, 2015; technical consultation on cancer registration and coding of medical

record administration, cancer registration and pathologists); Macau (2013; technical consultation on quality of cancer registration and coding for delegates from Health Bureau); Papua New Guinea (2015; technical consultation on cancer registry activities); Brunei Darussalam (2016; national cancer registry workshop); and Fiji (2015, 2017; technical consultation for oncology unit establishment, course for improving the quality of cancer registration). More recently, the development of the CanLEAD program by the WHO Western Pacific Regional Office has increased access to educational material across the cancer control continuum. In addition, the NCC has also contributed to the training of several individuals from low- and middle-income countries through the establishment of the Graduate School of Cancer Science and Policy. As mentioned above, Korea had a variety of experiences and successes for a short period in the area of cancer registries. Thus, the KCCR, which carries out national cancer registration projects, will be play an optimal role as part of the GICR in sharing knowledge with neighboring countries, and to directly help them to develop.

The Development and Achievement of Population Based Cancer Registry in Brunei Darussalam

Sok-King Ong[1, 2], Daphne Teck Ching Lai[3], Owais Ahmed Malik[3]

[1]Ministry of Health, Brunei Darussalam. [2]PAPRSB IHS, Universiti Brunei Darussalam. [3]Faculty of Science, Universiti Brunei Darussalam.

Abstract: The Brunei Darussalam Cancer Registry (BDCR) was established in 2002 under the Ministry of Health to capture population-based cancer database of different types of cancers in Brunei, providing yearly cancer data and. In 2016, BDCR has successfully upgraded its database with CanReg-5 software to further strengthen the monitoring and reporting of cancer epidemiology. Currently, cancer notification has yet to be mandated under legislation in Brunei. To build a complete national database, cancer registration was achieved through a combination of data sources including (a) notifications by medical professionals, (b) pathology records, (c) hospital electronic medical records, and (d) mortality data from the Registry of Births and Deaths. With the latent phase of cancer progression, there is an inevitable delay between the diagnosis and its eventual reporting to a cancer registry. With the electronic medical record system (BruHIMS) established in all government hospitals and health centres in 2013, the delay between the end of the diagnosis year and the time of complete cancer registry reporting has been shortened to less than a year. Analysis on BDCR has recently started. In addition to descriptive approaches, other statistical and data mining techniques have been applied to study the registry deeply, such as cluster analysis of demographic data and survival analysis on lung and breast cancers. Brunei was found to have relatively higher incidence rates of common cancers (including breast and colorectal) compared to neighbouring countries. In the cluster analysis study, distinct demographic subgroups with clinical association to cancer types were found, and top cancers in these subgroups were found. (Results are not provided as they have been submitted for publication and are under review). These studies demonstrate the use of statistics and data mining techniques in a cancer registry to study cancer trends in Brunei that could suggest potential areas to develop targeted and improved healthcare management strategies.

The Malaysian National Cancer Registry: The Way Forward

Azizah Ab Manan

National Cancer Registry Department, National Cancer Institute, Malaysia.

Abstract: National Cancer Registry in Malaysia is a population based cancer registry that sought to obtain basic epidemiological and clinical data on all cases of cancer diagnosed in Malaysia. It was started with regional registry since 1994 in 6 selected states. Starting from 2007 all states in Malaysia had set up their own population-based cancer registries and head by National Cancer Registry Department in National Cancer Institute. The Objectives of the registry are to estimate the cancer burden by quantifying the magnitude of cancer morbidity and mortality, its geographic and temporal trends in Malaysia. To identify subgroups in the population at high risk of cancer to whom cancer prevention effort should be targeted and determine potential risk factors involved in cancer, to evaluate cancer control and prevention programme and to stimulate and facilitate research on cancer. The registry has published its first 5 years report (2007-2011). The ten most common cancer among Malaysian residents were breast cancers followed by colorectal, lung, lymphoma, nasopharynx, leukaemia, cervix uteri, liver, ovary and stomach. The age-standardised rates per 100,000 (ASR) were 86.9 in males and 99.3 in females. The lifetime risk for males was 1 in 10 and 1 in 9 for females. The incidence was highest among Chinese for both sexes. Unfortunately most of the cases were detected at late stage. Ministry of health (MOH) has developed cancer screening programme in order to detect more cases at very early stage such as Mammogram for breast cancer, Pap smear test for cervical cancers and iFOBT for colorectal cancers. MOH Also focus on awareness for adopting healthy lifestyles and anti smoking campaign. The role of registry will be enhances in evaluating the cancer control and prevention programme and plan in Malaysia.

Implementing the Development of Population Based Cancer Registries in Myanmar

Kaung Myat Shwe

Nay Pyi Taw General Hospital, Nay Pyi Taw, Myanmar.

Abstract: The increasing incidence and mortality of non-communicable diseases (NCDs) including Cancer in every year is one of the major concern of Myanmar. According to GLOBOCAN-2012 data, there were an estimated total of 63,633 new cases and 49,163 deaths in 2012. More specifically, the estimated age standardized incidence rate is 149.4/100,000 (30,770 cases) in men and 134.6/100,000 (32,863 cases) in women. The estimated age standardized mortality rate is 128.9/100,000 (25,651 cases) in men and 99.8/100,000 (23,512 cases) in women. IARC estimates 105,903 new cases (66.4% increase) and 85,438 deaths will occur annually (73.8% increase) by 2030, as compared to the 2012 figures. But these estimates in GLOBOCAN for cancer in Myanmar are based on data from cancer registries of neighboring countries that is assumed to be having similar occurrence of cancer in the population of Myanmar. Therefore, it is not the true estimate of cancer epidemiology of Myanmar. The Integrated Mission of Program of Action on Cancer Therapy (imPACT) which was planned and coordinated by International Atomic Energy Agency (IAEA), World Health Organization (WHO) and the International Agency for Research on Cancer (IARC) visited to Myanmar in 2015 to assess the comprehensive national cancer control capacities. The mission found that cancer registration is top priority for Myanmar and recommended to start PBCR in Nay Pyi Taw region as first step and then spread to other states and regions in future to set up PBCR for collection of cancer data. Recently, as part of The Global Initiative for Cancer Registry (GICR) activities, there is a Collaborative Research Agreement (CRA) between IARC and Ministry of Health and Sports of Myanmar. The aim of this CRA is to support sustainable improvements in the quality, scope and use of population-based cancer registry data in Myanmar. There is no doubt that the cooperation of regional and international organizations is very important for the success in implementing

PBCR development in Myanmar. With the help of IARC Mumbai hub, National Cancer Institute of Thailand, series of regional and national cancer registration training activities, technical support and networking are developed. In this way, Myanmar is expected to have country capacity for sustainable population-based cancer registration and will provide quality regional data which can used as extrapolated cancer data of the whole country in near future.

The Journey of Passion: First Result of Indonesia National Cancer Registry

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Abstract: Currently, Indonesia still face double burden of diseases. Non communicable diseases are imposing a growing burden upon low and middle-income countries, which have limited resources and are still struggling to meet the challenges of existing problems with infectious diseases. Cancer as non communicable disease still increasing since the national screening and early detection has not performed yet. We already have National Cancer Control Committee bridging two directories in Ministry of Health specifically Subdirectorate of cancer control and Subdirectorate of teaching hospital organizing national cancer control program such as Cancer Registry. Cancer registry has big responsibility as a background also being an evaluator of all programs. Indonesia with large populations, autonomous but linked regional registries will be more effective, so we conducted 14 regional registries to represent Indonesia cancer incidence in 2016. These registries work below National Referral Hospital and Provincial Health Office in each province. The result of cancer incidence in Indonesia 2008-2012 came from 26 cities/districts (covered 14% of Indonesian population) are trachea, bronchus, and lung cancer (highest in male, CR=2.31 per 100.000 pop) and breast cancer (highest in female, CR=11.65 per 100.000 pop). Hospital Based Cancer Registration at National Referral Hospital have been running, but most are not maximized. There are still many registries that have not collected data from anatomical pathology since did not directly involve pathologist. There are only 5 provinces that already have legal aspects in Population-Based Cancer Registration, namely South Sumatra, Jakarta, Yogyakarta, North Sulawesi and Bali. The coverage of cancer burden data is still very low (17.3%) when compared to target achievement with microscopic verification only 46.2%. The mortality data from official vital statistics which become one of validity indicator is still unavailable. Regarding these result and challenges, we will determine the prioritized provinces which fully supported by central government. For sustainability, it needs strong commitment from local government, not only building but also financial and develop human resources in Primary Health Care. Besides the low involvement of pathologist, cases from cancer early detection unit has not been the cancer registry's data source yet. We still continue the registration to collect the incidence cancer data 2013-2017 with strengthen system by involving local government and medical profession association. Besides these plans, monitoring and evaluation to have higher incidence case and better data quality are activities that routinely do. Being accepted in CI5 Vol XII is still Indonesia's next target.

Cancer Incidence in Ho Chi Minh City: Results from Population - Based Cancer Registration in 1995-2014

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Abstract: The Cancer Registry Unit was established in Ho Chi Minh Cancer Hospital in 1995. It is the basic unit for realizing the city cancer burden, providing information for planning and evaluating the effect of cancer control programs. This report is about the cancer status of Ho Chi Minh City from 1995 to 2014 on the occasion that the registry data has reached the level of 20 years. This paper overviews the city cancer statistics including incidence and trends in HCMC based on the population-based cancer registration of HCMC Cancer Registry from 1995 to 2014. In HCMC, there were 119,516 cancer cases observed in this period. The crude rate and age -standardized rate in male are 95.3 and 146.0 per 100,000, in female 100.1 and 115.7 per 100,000. In male, 5 leading cancers are lung (CR: 17.5, ASR: 28.8), liver (CR: 15.8, ASR: 24.4), colon & rectum (CR: 10.9, ASR: 17.0), stomach (CR: 8.0, ASR: 12.8) and larynx (CR: 2.9, ASR: 4.8). In female, 5 leading cancers are breast (CR: 20.1, ASR: 22.4), cervix (CR: 16.3, ASR: 19.3), colorectum (CR: 8.8, ASR: 10.6), lung (CR: 8.6, ASR: 10.6), and thyroid (CR: 6.9, ASR: 6.4). The most common cancers in both sexes increase rapidly from the age of 40. The cancer statistics in this paper will provide essential data for cancer research and evidence-based health policy in HCMC. The screening program for most common cancers of the 2 sexes should be applied to the subjects over 40 years old.

Cancer Registries in Vietnam: Facts and Challenges

Tran Thanh Huong

National Cancer Institute, Viet Nam and Hanoi Medical University, Vietnam.

Abstract: The first cancer registry of Vietnam started in Hanoi in 1987. Up to now, there are 9 cancer registries in different geographical areas, includes Ha Noi, Hai Phong, Thai Nguyen, Thanh Hoa, Hue, Da Nang, Ho Chi Minh, Can Tho and Kien Giang. Ha Noi & Ho Chi Minh are population based cancer registries. Da Nang & Thanh Hoa cancer registries are at the pilot phase, while other cancer registries are hospital based. Cancer registries received supports from the Ministry of Health, leaders from oncology hospitals and have trained staffs to do cancer registries. However, there are still challenges for cancer registries, includes cause of death registration does not exist; limitation facilities & staffs; e hospital records have not yet developed & standardized; lacking of regulations. The National Cancer Institute collected and analyzes data within the period 2004-2010, from 6 cancer registries in Vietnam. The results from this study will be presented. It also supported for more understanding of cancer registries in Vietnam and looking for networking and collaboration within regions.

Cancer Registration in Oceania

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Abstract: Oceania is a vast geographically dispersed Region covering around 8.5 million square kilometers with a population of close to 40 million. It includes Australia, New Zealand and 22 widely scattered Pacific islands. While Australia and New Zealand have advanced economies, and the northern Pacific islands have been well-supported by USA funding and technology, the southern Pacific islands generally have scarce resources and limited health budgets. Financial support for transfer and treatment of cancer patients to

overseas centers poses a further impost on scarce resources. Cancer is an increasing problem due largely to lifestyle changes, population ageing, and increasing evidence of infection-related cancers, such as cancers of the cervix and liver. Frequently cancer is among the top three causes of death among contemporary Pacific island populations. There have been cancer registries in the Pacific islands since the 1950s. The Pacific Community (formerly the South Pacific Commission) has advocated standardized cancer reporting since the mid-1970s and there have been additional collaborations with IARC and WHO, including the introduction of CanReg4 software in some islands (although with sub-optimal uptake). Despite these initiatives, there has been a checkered history of cancer registration, generally due to limited cancer registry capacity and resources. Notably Volume 10 of Cancer Incidence in Five Continents did not include data for the 22 Pacific islands. International initiatives to support cancer registration in the Pacific have included special missions, technical support and educational courses, often with funding support from international agencies such as WHO, the USA Centers for Disease Control, the Pacific Community, and Gates Foundation. Cancer registry and epidemiology courses have been provided by IARC and IARC has collaborated with Massey University (NZ) in establishing CanReg4 in some Pacific islands. Despite advances in some areas, registries in the Pacific are generally struggling. A common view is that past support, while very welcome, has been fragmented and often driven by international rather than local priorities that were not sufficiently responsive to local needs. At an Oceania Cancer Registry Symposium in Brisbane in 2016, which was attended by delegates from across the Region, the IARC Global Initiative for Cancer Registry Development was discussed at some depth. Strong support for a Pacific Regional Hub was expressed to provide the required ongoing support for cancer registration. There was a consensus that this should be a collective Region-wide endeavor with collective ownership and governance developed through Regional consultation. The challenges of financial sustainability and overcoming costs of travelling between dispersed Pacific islands were realized. Nonetheless there was strong support for making a concerted effort to make a real difference. Strategies for doing this were developed further at a regional meeting in Wellington in February, 2018. These are outlined in the present report.

The North American Association of Central Cancer Registries: Example of Regional Population Based Cancer Registry Network

Betsy A Kohler

North American Association of Central Cancer Registries, Illinois, USA.

Abstract: The North American Association of Central Cancer Registries is a collaborative umbrella organization for cancer registries, governmental agencies, professional associations, and private groups in North America interested in enhancing the quality and use of cancer registry data. All central cancer registries in the United States and Canada are members. This presentation will discuss how and why NAACCR was formed, its evolution over time, mission and goals, accomplishments and challenges. The use of the NAACCR model in other settings will be discussed.

Collaborating on the Annual Report to the Nation on Cancer in the United States

Betsy A Kohler

North American Association of Central Cancer Registries, Illinois, USA.

Abstract: Every year the Centers for Disease Control and Prevention, the National Cancer Institute, the North American Association of Central Cancer Registries, and the American Cancer Society collaborate to produce a publication on cancer incidence and mortality rates in the US. Through a rotating authorship and collaborative structure, these agencies annually produce one of the most cited peer reviewed papers on cancer incidence. This presentation will provide insight into the collaborative process, responsibilities, and benefits of multi-agency collaboration in the production of cancer surveillance data.

Incoporation of Pathology Laboratory Based Cancer Incidence Data to the National Cancer Surveillance: Sri Lankan Experience

Chamila Peiris[1], Sudath Samaraweera[1], Suraj Perera[1], Nirmala Jayanthi[1], Pushpika Samarakoon[1], Dilusha Udugama[1], Palitha Rathnayaka[2], Niranthi Perera[3]

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Abstract: Pathology laboratories play a pivotal role in cancer surveillance since most of the cancers are diagnosed at pathology laboratories. In the year 2000/2001, National Cancer Control Programme (NCCP), Sri Lanka expanded cancer surveillance into pathology laboratories. The progress of this process is reviewed. The National Cancer Control Programme in Sri Lanka was established in year 1980 and first cancer incidence data was published for the year 1985. Collection of data is from all cancer treatment centers in government hospitals and several private hospitals. Pathology laboratory based cancer surveillance from 2000 to 2008 functioned as a standalone activity and data remained unpublished. Since 2008 onwards, they were amalgamated into the existing cancer surveillance. There is a remarkable improvement of reporting from 6,115 cases from 16 laboratories in 2008 to 15,792 cases from 54 laboratories in 2015. Apart from the pathology laboratory of the National Cancer Institute Maharagama, 12 pathology laboratories each contributed more than 500 cancer cases per year and the highest number of cases in a year (2,468) was from the laboratory at Teaching Hospital Kandy in 2015. A series of initiatives were taken to ensure regular data flow. A Ministry Circular was issued in 2012. A guide book on cancer surveillance was prepared and distributed among the pathologists in the same year. The College of Pathologists of Sri Lanka extended fullest cooperation right from the beginning. Both the NCCP and the College regularly send reminders to the laboratories to improve coverage. Currently standard operating procedures are being developed to ensure uniformity of reporting by pathology laboratories. However, the reporting is a paper based system and it is timely to upgrade into the web based surveillance system. Since the coverage of private sector laboratories is minimal, measures need to be taken to enhance their reporting.

Quality Control of Cancer Screening Program Using Cancer Registry Data

Kumiko Saika[1], Tomohiro Matsuda[1], Hiroshi Saito[2]

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Abstract: In Japan, Cancer Registration Promotion Act has launched in 2016 and the registry data are expected to be utilized for cancer control. Providing quality control measures for cancer screening programs is one of the most important roles of cancer registry to reduce cancer mortality. Local governments offer cancer screening to their residents in Japan. While most of local governments follow subjects with positive screening test results, few follow those with

negative screening test results. Cancer registry data is expected to enable the local governments to precisely grasp cancer incidence among all subjects who received cancer screening. To clarify the problems for matching the screening information with cancer patient information from cancer registry, we did a pilot project in a certain city. We merged the cancer screening data which were conducted from April 2012 to March 2013 with cancer patients who were diagnosed from January 2008 to December 2014. The city managing cancer screening data and the prefecture managing cancer registry data experienced several difficulties in each situation. In this pilot study, the city had to provide personal information necessary for matching with the prefecture, as the matching itself was conducted in the cancer registration room which was in the control of the prefecture. The biggest issue facing the city was to overcome their regulations pertaining to protection of private information. And the issue facing the prefecture was to rearrange the dataset provided by the city since the format of data such as name or address were different from those used in the system of cancer registration. In this city, stomach, colorectal, lung, breast and cervical cancer screening were provided. Among cancers diagnosed within a period of two years from the date of cancer screening test, the proportion of cancers identified only by cancer registry were 23.5% for stomach cancer, 4.2% for colorectal cancer, 60.0% for lung cancer, 35.1% for breast cancer and 56.2% for cervical cancer.

Benefits, Burden, and Harms of Gastric Cancer Screening Andprevention in Japan: A Microsimulation Model to Quantifyintervention Options Using Cancer Registry Data

Hsi-Lan Huang, Chi-Yan Leung, Kota Katanoda, Tomohiro Matsuda, Shuhei Nomura, Kenji Shibuya, Eiko Saito.

Abstract: Little is known about the potential benefits, burden, and harms of the endoscopic screening program and other alternative screening strategies for gastric cancer in Japan. We aimed to identify a set of recommendable strategies for gastric cancer screening in Japan to provide an informative insight for policy decision making. For this purpose, we developed a microsimulation model of intestinal-type non-cardia gastric adenocarcinoma. Two screening modalities were considered: endoscopic screening and Helicobacter pylori (H. pylori) screening and eradication. Variation among starting age, stopping age, and screening interval resulted in 65 scenarios for evaluation: one baseline scenario, 51 endoscopic screening scenarios, and 13 Helicobacter pylori screening and eradication scenarios. Major modeled outcomes included life-years gained compared to baseline scenario (benefit), lifetime number of endoscopies performed (burden), and lifetime number of screening-related complications (harm). The findings from the study will identify the effective screening strategy under burden-to-benefit consideration.

Population Based Cancer Registry- Colombo, Sri Lanka: Progress & Way Forward

Suraj Nimalsiri Perera, Sudath Samaraweera, Nirmala Jayanthi, Pushpika Samarakone, Dilusha Udugama1, Chamila Peiris

National Cancer Control Programme, Ministry of Health, Sri Lanka.

Abstract: The progress towards the establishment of population based cancer registration (PBCR) in Sri Lanka is reviewed since there is no fully functioning PBCR in Sri Lanka. The National Cancer Control Programme, Ministry of Health, Sri Lanka commenced formal cancer surveillance in Sri Lanka through hospital based cancer registry with the publication of cancer frequency data for the year 1985. Since then, hospital based cancer registration was gradually expanded with the establishment of provincial cancer treatment centres over the years. Need of PBCR in a defined geographical area was highlighted by the external reviews conducted by the International Agency for Research on Cancer (IARC) in 2005 & 2008. NCCP developed the methodology with the guidance of IARC and commenced PBCR in Colombo district since 2012. The National Advisory Committee on Prevention & Control of Cancers, chaired by Secretary Health, granted administrative clearance. The aim was to obtain cancer incidence & mortality data from all possible sources within government and private sector including pathology laboratories (point of diagnosis), cancer treatment centres, medical record departments within the district and suburban health institutions (point of treatment) and death registrars (mortality). Necessary instructions were issued through circulars and guide books on PBCR. From year 2012 onwards, cancer incidence data are receiving from above sources. The coverage & quality of data was improved over the years. Progress of the data flow is reviewed regularly but still the coverage is below 100%. Under the Global Initiative for Cancer Registry Development (GICR), review mission to Sri Lanka by IARC in 2017, recommended developing standard operating procedures, appointment of steering committee for cancer registration, and quarterly & annual quality assessment to enhance the PBCR. Based on recommendations, this year, Sri Lanka will be signing a collaborative research agreement with IARC to become a GICR partner country.

The Evaluation of Quality Control in Cancer Registry Revolution of a Cancer Registry

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Abstract: National Cancer Institute, Sri Lanka (NCISL) managed by the Ministry of Health, is the specialized teaching hospital for cancer care in Sri Lanka. NCISL provides investigations, treatments, and follow-up care free of charge to all patients. As the premier center out of twenty cancer treatment centers in the country, NCISL caters for more than 50% cancer patients reported annually throughout the country. More than 8,500 new patients and over 60,000 inward patients annually are benefitted by the services of NCISL. Before 2005, the Medical Statistics Unit (MSU) of NCISL maintained patients' records manually. Only very limited data were available and retrieval of past records was not easy. In parallel to the manual registries, in 2005, MSU pioneered an electronic database in Excel spreadsheets to register new patients and to visualize basic information. Subsequently, it was further developed to an Access database which included topology of cancer based on the ICD-10 codes recorded under a dropdown list. The database was further expanded to record hospital deaths. With a series of modifications, the Access database has now evolved to a hospital-based cancer registry. The present registry consists of Topology, Morphology, Behavior, Differentiation, Tumor grade, Staging (ICD-O definition), Treatment methods and the Date of death. Furthermore, based on the database, it was possible to publish an annual statistical review since 2006. Clinicians, researchers and administrators frequently refer to the current cancer registry since most of the required data are readily available. Replication of the same database in other nineteen centers and networking them is recommended to share patient information. Cancer registries are beneficial for clinicians, administrators, and policymakers. Hence, regular evaluations and strengthening of cancer registries are important for cancer control activities in the country, because it plays a key role in planning and policy making.

Hpv-16 Genome Physical Status in Associated Cancers

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Abstract: Human Papillomavirus (HPV) is a common viral infection worldwide associated with a variety of cancers including head and neck, colorectal, penile, and cervical cancers. The integration of the HPV genome in these patients causes chromosomal instability and triggers carcinogenesis. The aim of this study was to investigate the HPV-16 genome physical status in four major cancers related to HPV infection. Formalin-fixed paraffin-embedded (FFPE) blocks from our previous projects on head and neck, colorectal, penile, and cervical cancers were collected, and HPV-16 positive specimens were used for further analysis. The DNA extraction copy number of E2 and E7 genes was calculated by qualitative real-time PCR method. Serially diluted standards that were cloned in PUC57 plasmid were used. Standard curve and melting curve analysis was used for quantification. Of the 672 specimens studied, 76 (11.3%) were HPV-16 positive, and randomly, 45 of them were included in this study. After the E2:E7 ratio calculation, we found that 35.6% (16/45) were integrated, 24.4% (11/45) were episomal, and 40% (18/45) were mixed forms. Statistical analysis showed that there were significant correlations between integration of HPV-16 and cervical cancer end stage carcinogenesis ($p < 0.0001$), episomal form, and ASCUS lesions ($p = 0.045$). Significant correlation in penile cancer patients was seen between the episomal form and high-grade cancer stage ($p = 0.037$). Integration is a major factor in the carcinogenesis mechanism of HPV and has different prevalence in various cancers with a higher rate in higher stages of cancer progression except in penile cancer.

Merkel Cell Polyomavirus (Mcv) Association with Colorectal Cancer

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Abstract: Polyomaviruses role in transformation of animal cells showed previously. Recently, Merkel cell polyomavirus (MCV) associated with Merkel cell carcinoma (MCC) in human and its role in another human cancers is under investigation. The aim of this study was to investigate MCV role in patients with colorectal cancer. This retrospective case-control study, used archived formalin-fixed paraffin-embedded (FFPE) blocks of colorectal cancer patients (case) and matched healthy subjects (control) diagnosed by expert pathologist from hospitals affiliated to Iran University of Medical Sciences, Tehran, Iran from 2011 to 2016. After DNA extraction by QIAamp® DNA FFPE Tissue Kit a Real-time PCR used for diagnosis. Positive control was cloned by Generay Biotechnology system. SPSS v.22 was used for analyses the demographic variables. Of 157 participants 66 were cases and 91 were control by mean age ± std. deviation 59.3±14.4 and 57.2±14.6, respectively. Males were 57.6% and 57.1% in case and control groups respectively. By Real-time PCR assay there was not any positive specimens in studied patients. Significant result was detected in rectum location and mucinous type of colorectal cancer in males. By the results of present study there were not any associations between MCV infection and colorectal cancer although low viral load or sample type could be confounder effect for this results. Further studies recommended to clarify this issue.

The First Result of Population-based Cancer Registry (Pbcr) in West Java, Indonesia: Establishing in 2016

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Abstract: Indonesia as one of the big country must have national cancer incidens, it means cancer incidens based on PBCR Jakarta (Globocan 2012) isn't exactly enough to extrapolate cancer incidens in Indonesia. Experiences from PBCR Jakarta, strengthening PBCR in Indonesia is very necessary to establish cancer registry in 14 provinces (decree from MoH), one of the province is West Java which by taking four areas i.e. Bekasi City, Cimahi City, Bandung Regency and Karawang Regency which has coverage 19% from of the entire population in West Java Province and 3% from all Indonesia population. West Java Province is the largest population in Indonesia and the second population density after DKI Jakarta from 34 provinces in Indonesia. The year of the incident was reported in 2008-2012 which the continuity of PBCR Jakarta. Canreg5 is used as software with 34 variables are collected. IARC tools are used to quality control the data. Data were collected from all health services. The flow of collecting data and reporting is done gradually from health services, City/Regency Health Office until Dharmais as National Cancer Centre. The most common cancer in male is nasopharynx cancer while in female is breast cancer. There is legal aspect from MoH which pointed out Hasan Sadikin Hospital as Hospital in charged for PBCR in West Java. But unfourtenately, legal aspect from either Provincial/City/Regency Health Office haven't been declared yet. The Office is in Hasan Sadikin hospital where was placed one registrar who has responsibility to PBCR. Multidiciplinary Team in Hasan Sadikin Hospital took the role as verificator and validator. The sustainability cancer registry in Hasan Sadikin Hospital has been strongly established. One big challenge is the degree from each Provincial/City/Regency Health Office not available yet.

Challenges of Female Cancer Incidence in Country in Transition

Dian Triana Sinulingga[1], Evlina Suzanna[1,2], Ester Marini Lubis[3], Aries Hamzah4, Ina Rosalina[3], Niken W. Palupi[4], Tri Hesti Widyastuti M[3], Lily S. Sulistiowati[4], Abdul Kadir[1], Pradnya Sri Rahayu[1], Desy Khairina[1], Fariha Rahmadhani[1], Julyanti Agustina[1], Septiawati[1], Anggi Kartikawati[1], Rini Yulianita[1], Rahel Christina[1] And Pbcr Teams From 14 Provinces.

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Abstract: Indonesia is a country with double burden problems;

communicable and non-communicable diseases. Our priorities programs are to reduce the morbidity and mortality in Childhood and Maternity for all the diseases, such as cancers. To know the situations and the challenges in cancer control programs especially for female in Indonesia. Using National Cancer Registry data, from 15 PBCR in 14 provinces and 26 municipals/districts as defined populations and diagnosed from 2008 – 2012. Data analyzed with Microsoft Excel/ Pivot Test. The coverage female cancer incidence in 2008- 2012 /ASR (w) in 14 Provinces were 40.85/100.000 with microscopic verifications only56.58%. Top 10 Female Cancer Incidence 2008-2012 was breast, cervix uteri, ovary, thyroid, corpus uteri, trachea - bronchus - lung, colon, rectum, nasopharynx and other skin, with microscopic verifications were 47.02% to 71.59%. Age distribution profiles for 0-39 years old were higher in Kalimantan Timur and Bali. About 46% female malignancies were organ related to hormonal such as breast, thyroid, ovary and uteri. From all the type of morphologies, only 9% related to hematopoietic and 8% related to sarcoma; others are epithelial. Although data quality from each province still need to improve but the stakeholders in each provinces and municipals/districts can see the picture of their female cancer situation. The main priorities to reduce the morbidity are to change the lifestyle and to improve the environment especially related to hormonal conditions. All the part of PBCR need to improve the coverage and diagnostic by improve recording of patients from admission, diagnostic, treatment, palliative until the follow up. All the PBCR need to improve the quality of data. Stakeholders need to promote the lifestyle and environment to prevent cancers and to detect them early.

Impact of Pink Ribbon Campaign on Breast Cancer Screening at Primary Care Clinic in Klang District, Malaysia

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Abstract: Breast cancer is the commonest cancer among female in Malaysia. The Malaysian National Cancer Registry Report (MNCR) 2007-2011 shows that the Age-standardized rate (ASR) for breast cancer was 31.1 per 100,000 populations which is lower as compared to our neighbours. However, our five-year survival rate was only 49.4%, which was the lowest in Asian countries. Forty-three percent of the patients presented at late stage (Stage III and IV), which was much higher as compared to Singapore (28.9%). Hence, the objective of the study was to promote breast cancer awareness among all women by offering annual clinical breast examination (CBE) on the spot and mammograms appointment when indicated.A retrospective review of collecting data for all women receiving CBE and mammograms in BBHC, Klang, Malaysia from 2015 to 2017. The pink ribbon campaign (PRC) was initiated daily in Bandar Botanic Health Center (BBHC) since January 2017. The related health care providers (HCP), were provided with continues nursing education (CNE) and short attachment in breast tertiary center to optimize their CBE performance. Outcome measures were number of CBE uptake and abnormal findings, and cancer detection rate by mammogram. There was 45.8% increased in CBE uptake from 9747 in 2016 to 14214 in 2017. Of these, number of abnormal CBE significantly increased from 135 in 2016 to 148 in 2017 (p=0.015). The total mammograms performed were 166 (2017) and 120 (2016). Of these, 44 (26.5%) were abnormal as compared to 22 (18.3%) in 2016. The cancer detection rate by mammogram was 6 in 1000.The pink ribbon campaign has increased the breast cancer screening by increasing the uptake of CBE and mammogram. Thus, it is necessary to enhance the pink ribbon campaign for early detection and intervention in order to improve overall survival rate in Malaysia.

Factors Associated with Late Stage Presentation in Breast Cancer Patients: A Malaysian Perspective

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Abstract: One in three Malaysian women present with stage III or IV at their initial breast cancer diagnosis. This poses a major challenge towards cancer control efforts in the country.We determined the factors associated with late stage at diagnosis among breast cancer patients in a Malaysian setting. A cross-sectional study including 511 breast cancer patients from the National Cancer Institute was conducted between August 2015 and August 2016. Information on patients' demographic, healthcare-related and psychosocial characteristics were gathered via face-to-face interviews. Data on disease characteristics were retrieved from medical records. Non-parametric test was used to evaluate the time points of the individual patients' journey. Multivariable logistic regression analysis was used to identify factors independently associated with late stage at breast cancer diagnosis (stage IIB onwards according to AJCC7 classification).Seventy-percent of patients presented with late stage at diagnosis. Median age at diagnosis was 51 years old comprising 63% Malays, 25% Chinese, and 12% Indians. The median time from symptom recognition to presentation was 5 weeks (22.5); presentation to diagnosis was 3 weeks (4); and diagnosis to treatment was 1.5 weeks (2). Based on mean ranking, there is significant difference in time to presentation and time to treatment between patients presenting with early and late stage diseases. In a multivariable logistic regression analysis, factors that were significantly associated with late stage at diagnosis include lack of patient autonomy in healthcare decisions (OR 0.47; 95% CI 0.28, 0.78), lack of transport (OR 2.44; 95% CI 1.49-3.99) and low cancer worry-score (OR 1.71; 95% CI: 1.14-2.56). A vast majority of patients in this study were diagnosed at late stages. Down staging has been shown to be possible in the local setting. Early diagnosis must be achieved in a time-sensitive manner and coordinated. Health literacy among Malaysians urgently needs to be improved ensuring population to be engaged with the health sector. Furthermore, innovative approaches in allaying the population's concerns and misconception about breast cancer and the value of cancer treatment can facilitate patient assessing a timely treatment.

The Changing Profile of Cancer Patients Treated at National Cancer Institute, Sri Lanka: An Analysis of Cancer Registry Data 2006-2012

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Abstract: National Cancer Institute, Sri Lanka (NCISL) is the premier center out of twenty state cancer treatment centers in the country and caters for more than 50% cancer patients reported throughout the country. More than 8,500 new patients and over 60,000 inward patients annually sought services of NCISL. Medical Statistics Unit of NCISL in 2006 pioneered a hospital based cancer registry consists of Topology, Morphology, Behavior, Differentiation, Tumor grade, Staging (ICD-O definition), Treatment methods and the Date of death. NCISL Cancer Registry data were analyzed up to year 2012 and National Cancer Incidence Data are available up to 2010. Trends of leading cancer reported with special emphasis on breast cancer is reviewed. The cancer registry data available at NCISL reveals top five cancers among females reported in 2006 are carcinoma of breast (26.5%), cervix (12.1%), ovary (9.7%), thyroid gland (9.7%) and oesophagus (4.4%). While the breast cancer remains as the leading site among females in consecutive years, other four sites have changed their positions between 2nd and 5th place. Breast cancer showed a rising trend over time to reach peak in 2011 (28.7%). Furthermore in 2006, almost half (49%) of all cases were between 45 – 59 years. The corresponding proportions in 2010 and 2012 were 44% and 45% respectively. The corresponding national figures in 2006 (49%) & 2010 (46%) were almost similar. The proportion of 60 years and above showed gradual increase from 27% (2006) to 34% (2012). The national figures also had the same trend from 2006 (25%) to 2010 (32%). The indoor mortality data of breast cancer patients available at NCISL (patients died at the hospital) reveals increase of breast cancer deaths out of total deaths, from 3.5% in 2006 to 4.2% in 2012. Decentralization of services would reduce the burden on patients, families and also on the Government.

Molecular Investigation of Human Papillomavirus (Hpv) in Recurrent Respiratory Papillomatosis (Rrp) Individuals

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Abstract: Currently, recurrent respiratory papillomatosis (RRP) as a common laryngeal wart in upper airway system of children and adults has been on the increase. Human papillomaviruses (HPVs) are suspected to be the causative agent of this disease. This study aims to investigate HPV incidence and genotype distribution in Iranian RRP patients. Specimens were collected from RRP patients who referred to hospitals affiliated to Iran University of Medical Sciences, Tehran, Iran, from Dec 2014 to Feb 2016 in a cross sectional study. After DNA extraction by QIAamp® DNA FFPE Tissue Kit, conventional PCR was performed and products were sequenced. INNO-LiPA HPV Genotyping Extra assay as another method for genotyping was performed. CLC Main Workbench 5 and MEGA6 software as well as SPSS v.20 were used for further analysis. From a total of 12 patients, 6 (50%) were male. Total mean age (y) ± SD was 9.8±6.3. All of RRP patients suffered from HPV infection and those infected with HPV-6 were 75% (9/12), 16.7% (2/12) were HPV-11 and one had co-infection by both HPV-6 & 11. Statistically, there was no correlation between demographic variables and HPV infection. The major cause of RRP is HPV genotypes 6 & 11 that could increase the risk of medical interventions. Broader studies are required to clarify the major risk factors in RRP patients.

Molecular Survey on Cervical Specimens: Hpv Investigation and Its Genome Integration

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Abstract: Human Papilloma Virus (HPV) as a major causative of different cancers is under investigation globally. In this study we aim to investigate HPV infection in different cytological and pathological stages by different molecular methods and then viral genome integration of HPV-16 and -18 determined by specific Real-time PCR method. Included women underwent liquid based cytology in clinics affiliated to Parto Laboratory, a referral centre laboratory in Tehran, Iran, from 2013 to 2015. Cytological investigation rolled out by specialists. Ethics obtained from the Iran University of Medical Sciences Tehran, Iran. HPV PCR were conducted by MY09/11 universal primers; HPV genotyping performed by INNO-LiPA HPV Genotyping assay; Genome status defined by two Real-time PCR assays. Statistics calculated by SPSS v.22 software. Totally, of 1668 included women mean age±Std. deviation of 35.6±0.7, HPV was detect in 632 (38%). By genotyping analyses 16 HPV types and 713 strains were detected. HPV-16 and -18 from high risk types and HPV-6 and -11 from low risk types were dominant types. We found HPV-16 strains mixed form (58.8%) and of HPV-18 strains episomal form were prevalent (92.9%). Statistics showed significance in presence of HPV-6 and WNL cases, HPV-16 and ASCUS, HPV-33, -39 and LSIL, HPV-6 and ASCUS, HPV-35, -56 and SCC. Our study showed high prevalence of HPV in low grade cervical lesions although its associated with higher grades. The HPV molecular testing extra to cytology is recommended. HPV-16 and -18 have different program in genome integration in infected cells.

Investigation of Hpv in Head and Neck Squamus Cell Carcinoma

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Background: Of recent, the head and neck squamous cell carcinoma (HNSCC) forms a major health issue. Human papilloma virus (HPV) has been investigated as causative agent for HNSCC. This study aimed to survey the HPV occurrence in HNSCC patients for new comprehensive molecular epidemiology reports. This retrospective study recruited patients from the hospitals affiliated to the Iran University of Medical Sciences, Tehran, Iran. Formalin-fixed paraffin-embedded (FFPE) blocks were subjected to DNA isolation by QIAamp® DNA FFPE Tissue Kit. Furthermore, nested PCR, HPV-16 specific conventional PCR, and extra INNO-LiPA HPV genotyping assay were performed. The PCR products were purified with the High Pure PCR Product Purification Kit and were then sequenced by ABI 3730 XL sequencer. CLC Main Workbench 5 and MEGA5 bioinformatics software were used to analyze the raw data and to create the phylogenetic tree. SPSS v.20 was used for statistical analysis. A total of 156 FFPE blocks were enrolled from 2011 to 2017. Total mean age (y) of participants was 60.5 ± 12.6; 77.6 % (121/156) were men and 22.4% (35/156) were women. Overall, 5/156 (3.2%) patients (3 females and 2 males) were detected HPV positive using the aforementioned three methods. HPV genotyping revealed HPV types 16, 2, 27, and 43 in these malignancies. Statistically, the tumor location and lymph node involvement indicated significant difference between the two sexes, whereas other characteristics revealed no significant difference. Although high risk HPV genotypes have been associated with HNSCC, our

findings emphasize on the probable potential of the low risk HPV types to correlate with the malignant tumors and their respective complications.

Burden of Paediatric Cancers in Sri Lanka: Review of Cancer Registry Data

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Abstract: According to the cancer incidence data over the past few decades, cancer incidence rate among children, shows an increasing trend worldwide. The objective of this study is to describe the trend of paediatric cancer burden in Sri Lanka utilizing the cancer registry data of the National Cancer Control Programme, Sri Lanka. By 2010, cancer incidence was reported to the National Registry from 39 centres including 13 pathology laboratories throughout the country. The review was confined to the period of 2000 to 2010 since use of ICD-O classification was commenced in 2000 and last analyzed data was available only for 2010. Reporting of cancers among 0-14 year males has increased from 191 in 2000 to 261 in 2010. For the same years reporting of cancer incidence among 0-14 year females increased from 179 to 261. Cancer incidence rate among 0-4 year age group has increased from 5.7/100,000 (male 5.5 & female 5.9) in 2000 to 13.4/100,000 (male 15.9 & female 10.9) in 2010, showing a 2.4 fold rise. Among 5-9 years increase was relatively less from 5.7/100,000 (male 5.5 & female 5.9) in 2000 to 7.6/100,000 (male 7.4 & female 7.9) in 2010. Nevertheless, the cancer incidence rate of 10-14 year age group remained relatively static over the corresponding period. Throughout the period, leukaemia was the commonest incident cancer among both males (2000 – 35%, 2010 – 38%) & females (2000 – 43%, 2010 – 33%). Frequency & relative proportion of other types of cancers among paediatric age groups were varied over the years. Apart from improved reporting, rapid increase in early childhood cancer may be suggestive of an increased exposure to carcinogenic substances during periconceptual, antenatal and perinatal period but warrants further in-depth investigation. Since survival data is not available, development of a follow-up mechanism is necessary to assess survival rates of paediatric cancers.

Anti Gastric Cancer Effect of Berberine Isolated from Mangrove Plant on Ags Cell Line Studies

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Abstract: Berberine is a natural isoquinoline alkaloid isolated from various Chinese herbs, including indian medicinal plants. Herein, we desire to report the in vitro evaluation of Berberine on AGS cell line. In the present investigation, after 24 h incubation, the inhibitory effect of Berberine was found to have significant activity on AGS cell lines proliferation. Among the tested concentrations, Berberine at 80 µg/ml showed a higher level of mitochondrial depolarization, DNA fragmentation and induced apoptosis in AGS cells when compared to control. A similar but lower activity was observed in minimum doses of 20 and 40 µg/ml compared to maximum dose of 80 µg/ml. 50% and 100% cell viability was observed at 20 and 80 µg/ml, respectively. Likewise, there was a significant reduction in thibarbituric acid reactive substrate (TBARS) and lipid hydroperoxides (LPH) levels, while antioxidant enzymes like superoxide dismutase (SOD). Catalase (CAT), glutathione peroxidase (GPx), reduced glutathione (GSH), Vitamin-C (Vit-C) and Vitamine - E were increased on Berberine treatment in a dose dependent manner. On the basis of results, it is concluded that isolated compound (Berberine) from C.decandra had a potent antigastric carcinogenic effect at 80 µg/ml in AGS cell lines and appeared to be more sensitive towards the AGS cell line.

Immmunohistochemical Expression of Cmyc and Pd1 in Oral Squamous Cell Carcinoma

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Abstract: Oral Squamous Cell Carcinoma (OSCC) is an aggressive malignant epithelium affecting the oral cavity, which occupies the sixth most common neoplasm with an increasing incidence and mortality globally everyear. It represents 80 to 90% of oral cavity malignancy. In India, OSCC ranks third among the frequent cancers with an annual incidence of 52,000 patients and a mortality of 77% in developing nations.To analyse the immunoexpression of the proteins C-MYC and PD1 in Oral Squamous cell carcinoma and also to evaluate the relationship between the expression and clinicopathological factors. A retrospective study was performed on 101 patients samples and the protein expression was investigated with the help of immunohistochemistry. Clinical and pathological variables were analyzed and patients survival was analysed using Kaplan Meier survival analysis. In the present investigation, C-Myc and PD1 showed protein positive expression in OSCC patients and was found to be 49.4% and 29.4%, OED cases it was found to be 83.33% and 0% were positive and 100% negative expression was observed in both as far as control group of the patients were concerned. However, we found significant association was seen all above groups of C-Myc and PD1 ($p=0.005$ and 0.044) respectively. The overall survival analysis using Kaplan Meier survival with log rank showed significant association in C-Myc ($p = 0.017$), similarly, PD1 showed less significant association ($p = 0.727$) in OSCC patients. However, multivariate analysis failed to show the analysis C-Myc and PD1 Expression as independent prognostic factor for OSCC patients. The comparison between positive and negative expression of C-Myc and PD1, showed negative expression was better than positive expression in terms of overall survival in OSCC patients.

Stabilizing P53 Mutant Y220c by Berberine and Its Derivative: A Virtual Screening, Molecular Docking and Admet Study

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Abstract: p53, as a transcription factor, plays an eminent role in tumor suppression. Y220C, a substitution mutation, which cause major structural changes in the protein, is evidenced to form a new protein cavity. This cavity is reckoned to accommodate small drug candidates, which may play a key role in cancer suppression. In the present, study we have tried to determine a drug candidate based on structural drug discovery. Docking simulation on mutated p53 was performed to determine the best drug candidate from the derivatives of 1- hydroxy-2-methylanthraquinon, a known anti-cancer agent. A total of 479 structures had been selected on the basis of molecular fingerprinting towards the 2D crystal structure of berberine. With a combination of tools and knowledge based method the cavity had been tested for identification of an accurate position vector for molecular docking studies. Molecular Docking

was simulated and study has been carried out by using Lamarckian Genetic Algorithm (LGA), a novel conformational search strategy. MGL's Auto Dock 4 which have a free energy scoring function, based on linear regression and uses the AMBER force field for optimization, have been used for Docking studies. The post-docking studies had confirmed fluctuating binding energies along with a few cases (~14%) of structural damage and possible fragmentation. The minimum binding free energy had been recorded within a range between -14.05 and -4.55 k Cal/mol. Our studies conform the binding of ligand at the active site cavity as hydrogen bonds and polar contacts between the ligand and the protein cavity.

Profile of the Japanese Association of Cancer Registries

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Abstract: The Japanese Association of Cancer Registries (JACR) was founded in December 1992, and was officially recognized as a non-profit organization in January 2010. In the beginning, it aimed to develop population-based cancer registries. In 2016, the Japanese government implemented a law concerning the promotion of cancer registration, which improved the quality of data. In recent years, the JACR's role has shifting to promote the use of cancer data. The JACR consists of 47 prefectural registries, one city cancer registry, and 32 patronage members. Our objective is to promote the use of population- and hospital-based cancer registry data for cancer control, epidemiologic research, public health programs and patient care. The JACR comprises the Japan Cancer Information Partnership (J-CIP), Academic, Safety Management, Education and Training, International, and Public Relations Committees, which collaborate but act within their respective areas of specialization. The JACR provides information about cancer incidence, mortality, and survival rates through cancer registration, conducts public and scientific seminars, surveys, and research, and trains cancer registry personnel. Sources of information include our website, biannual newsletters, and annual monograph. Data are also provided to regional cancer registries that support international activities such as the CONCORD study. The JACR holds annual scientific meetings for its members to promote information exchange, education, and training, and to commend young investigators and registrars for achievement in research and registry. The Japan Medical Association and JACR have collaborated in organizing an annual symposium since 2014. The JACR also disseminates information about its activities at annual meetings of the Japanese Society of Public Health.

Role of Chromosomal 1p/19q Co-Deletion on the Prognosis of Oligodendrogliomas in Pakistan

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Abstract: Analysis of 1p/19q deletion in Formalin-fixed, Paraffin-embedded (FFPE) specimens of Oilgodendroglioma by FISH probes 1p/19q co-deletion is a pathognomonic biomarker that defines a distinct glioma entity and is characteristic of oligodendrogliomas. The presence of 1p/19q co-deletion is a strong independent prognostic biomarker associated with improved survival in both diffuse low-grade and anaplastic tumours.1p/19q-co-deletion has predictive value for response to chemotherapy in anaplastic oligodendrogliomas. FISH is unable to differentiate between the whole chromosome arm deletions with centromeric breakpoints characteristic of 1p/19q co-deleted oligodendrogliomas, from smaller focal deletions. This distinction is important given the association of 1p/19q whole-arm co-deletion with improved survival and response to chemotherapy in the oligodendroglial tumour subtype. Fluorescent in situ hybridisation (FISH) is a reliable, cost-effective method that is capable of detecting the abnormality in minimal amounts of tumour cells on formalin-fixed, paraffin-embedded (FFPE) tissue sections. Dual fluorescent-labelled DNA probes are used to detect 1p and 19q loci within the interphase nuclei of individual glioma cells from FFPE tissue sections transcribed on to unstained slides (charged slides). Changes in the 1p and 19q probe signals compared with controls are used to determine the presence of 1p/19q-co-deletion. FISH probes targeting 1p and 19q regions were used to determine deletion status of oligodendrogliomas patients having grades II or III disease. FISH was performed on 4 Î¼m thick tissue sections using Abbott Molecular (USA) dual color probe sets [LSI 1p36/LSI 1q25 and LSI 19p13/LSI 19q13] according to the manufacturer's instructions. A total of 60 nuclei were examined. The ratio was calculated for 1p and 19q deletion by dividing 1p or 19q signals by their respective control signals; <0.8 was considered as abnormal for both targets. This study investigated 99 patients of oligodendroglioma enrolled between 2013 and 2016 at the Aga Khan University Hospital. 2016. The male to female ratio was 2:1. Mean age was 39 years and patients' ages ranged from 13 to 79 years. Thirty-five (35%) cases demonstrated co-deletion of 1p/19q, 2 cases showed isolated 1p deletion, whereas 19q deletion was positive in 9 patients. Among patients exhibiting 1p/19q co-deletion, 17 cases (48.5%) were grade II tumors and 16 cases (45.7%) were grade III tumors. Two (5.7%) of the cases had features intermediate between grade II and III. On the basis of our findings, patients with 1p/19q-co-deleted anaplastic oligodendroglial tumours should not be treated with radiotherapy alone, but instead receive early alkylating chemotherapy with radiotherapy. A similar approach should be considered in a subset of patients with grade II oligodendroglioma.

In Vitro Cytotoxicity and Apoptotic Assay in Pa-1 Cell Line Using Carica Papaya Leaves Extract

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Abstract: At present, cancer treatments are associated with severe adverse effects for the patients. Carica papaya Ficus (Family- Caricaceae), well known beneficial medicinal shrub has been traditionally used for the treatment of various diseases such as leucoderma etc. The aim of the present study is to investigate the efficacy of Carica papaya ethanolic leaves extract for antiproliferative, apoptotic, cell cycle blockade and wound healing. The Carica papaya leaves extract was treated with PA-1 cancer cell line for 24 hrs. with control. The cells were treated at varying concentration ranges of 15 µg, 31 µg, 62 µg, 125 µg and 250 µg per ml each. The cytotoxicity effect of leaves extract was studied by MTT assay and the anticancer activity was further evaluated using cell cycle analysis and wound scratch assay. The end anti-proliferative result showed that showed that PA-1 cell viability decreases in a concentration dependent manner and the growth inhibitory effect (IC50) values are obtained at a concentration of 125 µg. The increase in number of apoptotic cell was observed after treating PA-1 cells with the sample in double staining methods. G2/M phase of the cell cycle was significantly blocked by the test sample followed by the S phase in a negligible manner. In vitro cell wound closure or contracture was not significant when compared the sample against control group. Carica papaya ethanolic leaves extract had shown to possess excellent cytotoxic effect through inducing apoptosis especially causing cell cycle arrest at the G2/M phase.

Jc Polyomavirus (Jcv) Investigation in Iranian Colorectal Cancer

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Abstract: Polyomavirus JC virus, belongs to the polyomaviridae family. This family includes two viruses: the JC virus (JCV) and the simian virus SV40 .It has been reported that up to 80% of normal population change to seropositive status between 5 and 10 years of age .Transplant recipients are more susceptible to severe JC virus infection. Urogenital and mononuclear cells have been shown as the sites for dissemination and perseverance of JCV. The in-vitro and in-vivo behaviors of JCV make the virus notorious as a tumor virus. Detecting BKV in peripheral blood cells has been led to hypothesis of involvement of JCV in lymphoma. Immunocompromised conditions reactivate JCV infection. Polyomavirus tumor antigen (Tag) sequences especially SV40-specific was detected in non-Hodgkin lymphoma. Furthermore, it has been assumed that the rate of multiple virus isolation is significantly greater in children with acute lymphoblastic leukemia than normal population .Considering the scarce data on the presence of urinary excretion of BKV in children with, we studied the urine JCV in newly diagnosed leukemic children comparing with normal population. Materials and methods, 157 subjects (66 All cases and 91 controls) were enrolled in the study. Epitelial cells isolated from urine samples were screened for the BKV DNA with real-time PCR method. None of them detected Positive real-time PCR for JCV virus No positive result for JCV was achieved in control group. However, Fisher Exact test did not show any significant difference between two groups, p>0.05. In addition, there was no significant correlation between location and grade of tumor. In our study, none of 157 patients with newly diagnosed colorectal cancer had JCV. Although there was not any significant difference between JCV in colorectal cancer and control group, no case of JCV had been found in control group. To demonstrate the role of JCV in inducing colorectal cancer or increasing number of relapses, prospective studies on larger scale of population and evaluating both serum and urine for BKV are recommend.

Study on Data Coverage of Bangkok Cancer Registry

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Abstract: Bangkok has the population around 6 million plus 4 million of hidden population. There are 108 hospitals that provide complete and partly of cancer treatment. And other 33 hospitals in suburb areas where some people go to have the treatment. Bangkok has started the Cancer Registry since 1988, by gathered the information from 141 hospitals, death certificate data and Universal Coverage data. There are 9 hospitals that have radiotherapy services in Bangkok. Collecting the information from 141 hospitals, it is required a lot of people, materials and more budget. In general, in this study, we would like compare the data collect from 141 hospitals with the data from only 60 hospitals that most of cancer have been treated. We conducted the meeting to explain study plan and objectives and the training how to collect the information. Separated the hospitals into 2 groups, first group is for 60 selected hospitals, fully option for cancer treated. Second group is the hospitals in Bangkok and suburbs area 141 hospitals. Then analysis and compare the data from the two groups by Capture Re Capture methods. We Collected data from 60 big hospitals is covered by 95% new cancer cases in Bangkok. In the study, collecting the information from big hospitals only can reduce the working cost but covered 95% the new case cancer in Bangkok. This could be consider in the next phase to reduce number of data collection to save budget.

Epidemiology of Liver and Bile Duct Cancer in Northern Thailand

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Abstract: Liver and bile duct cancer is the most common cancer among men and the fourth most common cancer among women in the northern part of Thailand. This study aimed to determine the epidemiological characteristics and distributions of liver and bile duct cancer in Northern Thailand. We collected data from 6 population-based cancer registries in Northern Thailand; including Chiang Mai, Lampang, Lamphun, Phrae, Phayao and Chiang Rai. which diagnosed new liver and bile duct cancer patients (ICD-O: C220-221, C240, C249). We examined age-specific rate and age standardized incidence rate (ASR per 100,000 populations per year) of liver and bile duct cancer from 2008 to 2012 using R program. During period 2008-2012, the total number of liver and bile duct cancer was 10,500 cases, 7,344 cases in men and 3,156 cases in women, accounting about 69.9 % of all cancers in men and 30.1 % in women. The average age-standardized incidence rates were 37.25 per 100,000 population per year among men and 14.5 per 100,000 populations per year among women. Most of cases occurred in the age group 75-79 years in both sexes. The highest incidence rates of both sexes were found in Phrae province (ASR = 78.78 among men, 28.29 among women) and the lowest incidence rates of were found in Lamphun province. Liver and bile duct cancer has two main histological types: hepatocellular carcinoma (HCC; ICD-O: C220) and cholangiocarcinoma (CCA; ICD-O: C221, C240, C249). Among men, HCC was found more common, accounting for 52.75% and the average ASRs were 22.2 among men and 7.0 among women. By contrast; among women, CCA was found more common, accounting for 53.23%and the average ASRs were 18.84 among men and 8.43 among women. Phrae province had the highest incidence rates of both HCC (ASR =37.65 among men, 12.16 among women) and CCA (ASR = 40.65 among men, 15.78 among women). The highest proportion of HCC was found in Lamphun (72.4% among men and 66.3% among women). However, Chiang Rai had the highest proportion of CCA (58.9% among men and 63.0% among women). Liver and bile duct cancer is now the major health problem for population in Northern Thailand. Regarding different strategies for cancer control of each type of this cancer, etiological studies are required to further elucidate factors contributing to the divergent liver and bile duct cancer incidence in Northern Thailand.

Breast Cancer Survival Trends in Northern Thailand 2003-2012: A Population-based Study

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Abstract: Breast cancer is the most common cancer in Thai women. Cancer survival estimated from population-based cancer registry data is being used to formulate cancer control strategies, to prioritize cancer control measures, and to assess the effectiveness of those strategies. In Northern Thailand, there are 4 population-based cancer registries which have collected data during the year 2003-2012, including Chiang Mai, Lampang, Lamphun and Phitsanulok. To evaluate the 5-year relative survival rates for female breast cancer in Northern Thailand. In this study, we used population-based cancer incident cases of Chiang Mai, Lampang, Lamphun and Phitsanulok provinces covering about 40% of northern Thai population. The incident cases of breast cancer diagnosed during 2003-2012 were followed up until the 31st December 2015. These cases were followed up by passive method, including matching with medical records, death certificates and house registration database; and active methods, including postal/telephone enquiries and home visits. The overall relative survival rates for the whole period 2003-2012 and each period of 2003-2007 and 2008-2012 were analyzed.Over the period 2003-2012, there were 6,698 cases diagnosed with breast cancer. The 1-year, 3-year and 5-year overall relative survival rates for breast cancer were 85-93%, 72-79% and 65-71%, respectively.The 5-year relative survival rates for breast cancer of stage I, II, III and IV were 82-94%, 72-79%, 48-54% and 13-31%, respectively. The 5-year relative survival rates of all provinces in period 2008-2012 increased compared to those in period 2003-2012.Considering the northern part of Thailand, the regional range in breast cancer survival is moderately narrow. The improved relative survival rates of breast cancer in all provinces are likely to be attributable to earlier diagnosis and more effective treatment.

Subtype of Breast Cancer Incidence Trends Among Chiang Mai Population

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Abstract: Breast cancer is the most common cancer in Thai women. Studying trends in female breast cancer incidence by subtype provides evidence for policy, and planning appropriate treatment facilities to improve prognosis and survival rate for breast cancer patients. This study aimed to describe the incidence trends in female breast cancer by subtype among Chiang Mai population. Data were collected from all hospitals in Chiang Mai in northern Thailand, and used to describe the age-standardized rates (ASR) of four breast cancer subtype based on ER/PR and HER2 status: 1) Luminal-A (ER+ or PR+ and HER2-), 2) Luminal-B (ER+ or PR+ and HER2+), 3) HER2 (ER- and PR- and HER2+), 4) triple-negative (ER- and PR- and HER2-) and estimate the annual percent change (APC) using joinpoint regression model. Among 3, 228 female breast cancer cases who were diagnosed during 2004-2013 with median age of 52 years, 23% were localized stage, 66% were regional stage and 7% were distant stage. In 2013, the ASRs of breast cancer were 16.94, 4.57, 4.00 and 4.90 per 100,000 women-years with Luminal-A, Luminal-B, HER2 and triple-negative subtypes, respectively. There were 3.4 patients per 100,000 women-years with unknown tumor subtypes. The incidence rate of breast cancer with Luminal-A, Luminal-B and HER2 subtypes were significantly increased by 14.3, 1.9 and 8.7 per year ($p<0.001$), respectively whereas incidence rates was stable in breast cancer with triple-negative subtype. The incidence of unknown subtype was significantly decreased by 19.1 per year. The incidences of breast cancer with triple-negative subtypes were not significantly increased, whereas the incidences of breast cancer with Luminal-A, Luminal-B and HER2 subtypes have been increasing. Thus, in the future, the treatment facilities with a variety of hormone therapies and ani-HER2 therapies should be provided for increasing efficacy and coverage of treatment for this population.

Cancer Incidence and Mortality in Lop Buri Thailand, 2012-2016

atit Leklob, supakran Pomkong, chaniporn Madee, chapaporn Nantaya, rujira Paoprom, mukda Luangaram

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Abstract: Lop Buri Cancer Hospital, one of the six regional cancer centers was established in 1994, under the supervision of the National Cancer Institute for cancer prevention and control in the eastern part of Thailand as a result the population-based cancer registration in the province has been set up. The National Cancer Institute and all regional cancer centers have a role in all main activities of cancer prevention and control, including prevention, screening and tertiary care as well as having clinical research activity. Lop Buri Cancer Hospital has provided programs in patient and public education and in continuing education for health professionals, particularly family physicians and general nurses especially in the center part Thailand. The covered only 12 Provinces : Ang Thong , Lop Buri, Chai Nat, Saraburi, Chaiyaphum, Nakhon Sawan, Uthai Thani, Kamphaeng Phet, Phichit, Phetchabun, Suphan Buri, Sing Buri. There were 8,497 incident cases of new cancer in Lop Buri residents, during the period of 2012-2016, 4,234 among males and 4,263 (ASR = 191.6) among females (ASR = 170.7), with sex ratio of new cancer cases in males and females approximately 1:1 Among males in Lop Buri (2012 – 2016), Liver cancer was the most common cancer (892 cased, ASR = 39.5 per 100,000 population) followed by Lung cancer (590 cases, ASR = 25.8 per 100 000 population) and colorectal cancer (536 cases, ASR = 24.0 per 100 000 population) For female in Lop Buri (2012-2016), breast cancer was the most common cancer (1054 cases, ASR = 42.2 per 100,000 population) followed by cervical cancer (418 cases, ASR = 16.5 per 100,000 population) and colorectal cancer (382 cases, ASR = 14.9 per 100,000 population). There were 4,040 cases of cancer death in Lop Buri residents, during y the period of 2012-2016, 2,572 among males and 1,468 among females, with sex ratio of cancer death in males and females approximately 2:1. The age standardized mortality rates were 114.9 per 100,000 population among males and 56.3 per 100,000 populations among females. During 2012-2016, registration of the three most common forms of cancer death, Liver cancer was the most common cause of cancer death (733 cases, ASR = 32.5 per 100,000 population), followed by Lung cancer (473 cases, ASR = 20.7 per 100,000 population) and Colorectal cancer (212 cases, ASR = 9.4 per 100,000 population). For female in Lop Buri, cancer of the three most common forms of cancer death, Liver cancer was the most common cause of cancer death (238 cases, ASR = 9.0 per 100,000 population), followed by Lung cancer (211 cases, ASR = 7.9 per 100,000 population) and Breast cancer (148 cases, ASR = 5.8 per 100,000 population).

Development of Thai Cancer Based Program for Cancer Informatics in Thailand

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Abstract: Cancer is the important health problem in many countries including Thailand. Cancer registries are an essential element in the planning and monitoring of cancer control strategies, and for identifying priorities in public health Thailand has stetting cancer Registry since 1988 by collecting new patients from different hospitals in Thailand. The first volume of Cancer in Thailand had the information from 4 provinces. The current Cancer in Thailand is the 8th edition with has the information from 12 provinces. There are different software to record the data. After record data each hospital will send the data to NCI for checking each variables, duplicate and

coding. In 2013, the Ministry of Public Health implement new policy, called Service Plan Policy, to strengthen the health care system. It is proposed that hospital level A and S should set up hospital based cancer registry. We therefore developed Thai Cancer Based (TCB) program to serve Service Plan policy and help connection cancer informatics in each health region. In developing Thai Cancer Based program for Cancer Informatics including 2 programs 1).Window application for recording and reporting for hospital based cancer registry. 2).Web based Application for reporting from hospital and population based cancer registry. Today, 504 hospitals has installed Thai cancer based program and 336 hospitals connected to web data center. There are 8 hospitals conduct annual report using Thai cancer based program. Even our program have been launched for service plan just a few years most people in all health region satisfy in using our program. We could create the networking among user. In addition, our programmer and team are developing new referring cancer data extended from TCB, this will benefit for patients to reduce their time and cost to go to another hospital for further diagnosis or treatment.

1, 2-Epoksi-3[3-(3.4-Dimetoksifenil) 4h-1-Benzopiran-4-On] Propane (Epi) Is an Isoflavone-derived Compound Synthesized from Cloves Leaf Oil

Ar Pratiwi Hasanuddin

Abstract: In this study, the effects of EPI on cell growth characteristics, including proliferation and cell cycle progression in T47D human breast cancer cells were investigated. EPI reduced viability of T47D cells and induced G0-G1 phase arrest in the cell cycle. The treatment of EPI significantly decreased cyclin D expression, which can cause G0-G1 cell cycle arrest in T47D cells. Based on these results, EPI could be considered as a candidate for the treatment of breast cancer.

Treatment and Survival in Patients with Chronic Myeloid Leukemia in a Chronic Phase in West Iran

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Abstract: CML includes 30% of all leukemias, and occurs from childhood to old age. The present study was a retrospective analysis of chronic phase CML patients registered to a Hematology Clinic in Kermanshah, Iran, with checking of treatment options. Between 2002 and 2014, 85 CML patients referred to our hematology clinic were enrolled in our study. We surveyed age, sex, B-symptoms, splenomegaly, Sokal score, Hasford score, treatment and survival in all patients. Philadelphia chromosome analysis was conducted for each patient by conventional cytogenetics. We compared treatment in the patients with three drugs, imatinib, hydroxyurea (HU) and interferon alpha ((IFN-α). Results: The mean age of the patients at diagnosis was 47.5±14.5 years (range, 23-82 years), with 43 (50.6%) being male. Some 13 (15.3%) were referred to our clinic for the first time with B-symptoms and 44 patients (51.8%) had splenomegaly. The Sokal score for 77 (90.6%) was low, 4 (4.7%) was intermediate and 4(4.7%) was high, but Hasford (Euro) scores for all patients were low. The 5-year survival rate for treated patients with imatinib, imatinib plus HU and imatinib plus HU plus (IFN-α was 90.5%, 81.1% and 55.6%, respectively. The results show that imatinib therapy alone provides better survival in CML patients compared to HU or (IFN-α.Combinations of (IFN-α and/ or HU with imatinib probably reduce survival.

Nutritional Risk Factors in Women with Breast Cancer

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Abstract: Breast cancer is the most common cancer diagnosed among women. There is limited scientific data on nutritional risk factors and breast cancer from India, hence, the present study was conducted. A total of 200 newly diagnosed and histopathologically confirmed female breast cancer patients (cases) were matched with an equal number of healthy controls for age (± 2 y), sex, and socioeconomic status were enrolled. Data was collected on socio-demographic profile, physical activity and dietary intake (24 hour dietary recall and food frequency questionnaire) using interviewer administered structured questionnaires and standard tools. Data was analyzed by univariable conditional logistic regression and significant variables with ($p< 0.05$), were analyzed in final model by conditional multivariable logistic regression analysis. The mean age of patients at diagnosis of BC was 45 ±10 years. Women with physically light activities and occasional consumption of eggs were found to have higher odds of BC [4.6 (1.6 to 13.0)] and [3.2 (1.6 to 6.3)]. A protective effect of urban areas as place of residence and energy intake greater than 50% of Recommended Dietary Allowance (RDA) per day against BC was observed ($p< 0.05$). The findings of the present study revealed a significant association of reproductive and dietary factors in women diagnosed with BC.

Frequency of Zap 70 Positivity in a Cohort of Chronic Lymphocytic Leukaemia (Cll) Patients. A Single Institute Experience

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Abstract: The clinical behavior of patients with chronic lymphocytic leukemia (CLL) is heterogeneous. Some patients have indolent disease without complications for many years others develop progressive disease requiring therapy within a short time after diagnosis. Prognostic markers as CD38 and ZAP-70 and specific chromosomal abnormalities as del 17p have now been developed to refine the risk of progressive disease in chronic lymphocytic leukemia (CLL). The objective of this study was to determine the Frequency of ZAP 70 positivity in CLL patients which is associated with progression of disease. All the patients diagnosed as Chronic Lymphocytic Leukemia from January 2010 to July 2015 were included. Clinical and laboratory findings were retrieved retrospectively from patients file. SPSS ver17 was used for statistical analysis. A total of 49 patents were enrolled including 35(71%) males and 14(28.5%) females. Mean age was 60 years. According to Rai staging, stage 0 was seen 25(51%) patients, stage I in 15(30.6%), stage II in 11(22.4%), stage III in 14(28.5%) and stage IV in 12(24.4%) patients. According to Binet staging 04(8.1%) in stage A, 04(8.1%) in stage B and 17(34.6%) noted. On bone marrow biopsy pattern of infiltration was Interstitial in (14%), diffuse in (21%), nodular in (07%), interstitial to diffuse in (07%) seen. Immunohistochemistry panel showed anti CD5, CD20, CD23, CD79 a in almost all the cases. ZAP 70 positivity was seen in 17(34.6%) patients. In conclusion, ZAP-70 is an established poor prognostic marker in B-CLL patients. In our center most of the

patients were in Rai/Binet 0/A stage. About 1/3rd showed ZAP 70 positivity which indicates poor prognosis. We done ZAP 70 marker on immunohistochemistry which is cost effective. All the CLL patient should not only be staged but also other genomic markers be applied to stratify the management accordingly.

Insilico Analysis of Fmrp Protein in Fragile X Syndrome

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Abstract: To evaluate the effect of mutation in FMR1 protein on the binding energy of protein interaction by homology modeling and docking study using Bioinformatics approach. As per NCBI/Swiss Prot database information normal and mutated FMR1 proteins with accession number AAB28395 and rs121434622, respectively and interacting proteins Cytoplasmic FMR-1 interacting protein, Cytoplasmic FMR1 interacting protein 2, Pre mRNA 3’- end- processing, Tudor domain-containing protein3 (TDRD3), Kinesin like protein KIF3C (KIF3C) and Microspherule protein 1 (MCRS1) has been modeled by using the web server MODWEB for tertiary structures and thereafter every interacting protein was allowed to dock with normal and mutated FMR1 protein by involving HEX server to record the changes in binding energy resultant of mutation. Based on the homology modeling approach, tertiary structures of all studied proteins were successfully modeled and further in docking analysis it has been observed that mutated FMR1 protein highlighted decreased change in the binding energy as compared to normal FMR1 protein docking. Based on the bioinformatics approaches, our study confirms that lowering change in the binding energy for the interacting protein with mutated FMR1 protein when compared to normal FMR1 protein does clearly affect the protein - protein interaction and hence it lead to Fragile X syndrome in affected patients showcasing such mutations.

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- ❖ The evaluation of quality control in cancer registries

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