25. 多発性骨髄腫における8p11領域遺伝子FGFR1, WHSC1L1発現の検討

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【目　的】　多発性骨髄腫 (MM) で予後不良染色体異常の代表の t (4 ; 14) は，第4番染色体短腕上 4p16 の FGFR3 と近傍の MMSET の増幅が原因と考えられている．4p16 の FGFR3-MMSET と 8p11 の FGFR1-WHSCL1 の構造は非常に類似していて，この領域の増幅は乳癌などで予後不良とされており，MM において治療抵抗性となった際に染色体分析で 8p11 の増幅がよく見られる．WHSC1L1 は MMSET と同じくヒストンメチル化酵素であることが判明していることも合わせると，これらの遺伝子が MM においても何らかの役割を果たしていることが示唆される．我々は WHSC1L1 と FGFR1 の発現が MM において増加しているかを検討した．【方　法】　MM の細胞株 KMS11, KMS12PE, KMS12BM, KMS18, KMS26, ARH77, RPMI8226 と同意を得た MM 患者 44 名，MGUS 患者 24 名と正常コントロール 6 名の骨髄単核球の mRNA を抽出し，FGFR1, WHSC1L1, FGFR3, MMSET の mRNA 発現を qPCR にて発現定量を行った．【結　果】　WHSC1L1 は MM-正常（1.772±0.912, 0.2433±0.186），MGUS-正常（1.038±0.548, 0.2433±0.186）と MM 有意に高発現であった （p＜0.05）．MMSET は MM-MGUS（2.453±1.547, 0.805±0.8014），MM-正常（2.453±1.547, 0.517±0.307）とやはり MM 有意に高発現であった（p＜0.05）．また各遺伝子の mRNA 発現量は FGFR1-WHSC1L1 で r＝0.266（p＝0.022），FGFR3-MMSET で r＝0.310（p＝0.007）と正の相関が認められた．妙なことに WHSC1L1-MMSET も r＝0.494（p＝0.0000008）FGFR1-MMSET で r＝0.405（p＝0.00034），WHSC1L1-FGFR3 で r＝0.254（p＝0.029）の正の相関が認められた．【結　論】　WHSC1L1 が MGUS, MM において高発現であることから，このヒストンメチル化酵素が MM への進展に関わっていることが示唆される．WHSC1L1 と近傍領域の FGFR1 の発現が正の相関を示すことは予想していたが，WHSC1L1 と MMSET 発現に強い相関が認められることの機序は不明である．この 2 遺伝子の役割に相違があるのかについては今後の検討課題である．

26. The Relationship between Health Insurance Schemes and Quality of Life in Bandung city, Indonesia

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【**Introduction**】　Quality of life (QOL) is an indication of well being of people in four domains (physical, psychological, social relationship and environment) that may help the goverment to understand and to evaluate their policy and strategy in health.　Health insurance is one of factors that influence QOL status.　Indonesia has six types of insurance schemes, and each type of insurance provides different services that may contribute to QOL status.　The aims of this study were to evaluate the QOL of people living in two subdistricts (Gedebage as less dense and Bojongloa Kaler as dense population) in Bandung City, and to define factors influencing QOL, especially on health insurance factor.　【**Methods**】　A cross-sectional study that used two questionnaires : 1) QOL questionnaire (WHOQOL-BREF) 2) Socio Demography questionnaire, conducted in March and April 2013 to evaluate the quality of life of 800 respondents.　Resulted data were analyzed statistically by EZR.　【**Results and Discussion**】　We obtained 800 responses from two areas, 794 participants completed the questions (response rate＝99.25％).　Distributions of some socio demographic conditions, gender, age, marital status, family size, occupation, health insurance type, smoking behavior were similar in both sub districts.　However, subjects in Gedebage had lower education level than those in Bojongloa Kaler.　The statistical analysis showed that age, education level, health insurance, smoking behavior, and self reported chronic diseases had significant influence (p value＜0.05) on QOL.　Meanwhile, marital status, family size and community empowerment did not have significant influence on QOL.　Health insurance type had significant influence on mean of QOL score.　People without insurance had higher mean of QOL (p＜0.05) and their QOL was not as low as we expected.　This result contradicted from previous

study.   Those who did not have insurance may be quali-
fied for poor insurance, but they did not apply due to
their present good health condition and their ability to
pay out of pocket.

27. Do Community Empowerment Activities Affect Quality of Life of People in Bangka and East Belitung Districts, Indonesia?

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【Introduction】 The measurement of QOL scores and
factors that influence QOL could have important implica-
tion for future interventions intended to improve health
outcome.   QOL has been proven affected by socio demo-
graphic characteristics and health insurance.   Even
though Indonesia does not have universal social security
system, community empowerment activities supported by
local government in health field are very active.   How-
ever, number of studies measuring health benefits of
community empowerment participation is very limited.
Here we want to clarify predictors of QOL of people and
to determine other factors that might influence QOL
focusing on community empowerment factor.
【Methods】 Survey was conducted in a sample of 827
people from Bangka and East Belitung Districts in March
and April 2013 using two questionnaires : WHOQOL
-Bref and socio-demographic questionnaires.   Collected
data were analyzed with statistic software (EZR) and the
significant level for all statistical tests was set at 0.05.
【Results and Discussion】 From 827 eligible respon-
dents selected randomly, 824 participated and completed
answer questions, reaching 99.6% of response rate.
Results showed that age group, chronic diseases, educa-
tion level, occupation, health insurance and community
empowerment participation (desa siaga forum) have in-
fluenced QOL significantly.   As expected before, subjects
who participated in community empowerment activities
had higher overall QOL and general health scores.   Two
-way ANOVA test showed that participation in desa
siaga, interaction between desa siaga forum participation

and district had significant influence on overall QOL.
Similar result also showed interaction between desa siaga
participation and gender has influenced QOL significant-
ly.   Participation in community empowerment activities
was suggested as a new potential factor affecting QOL.

28. Effects of Selenomethionine and Sodium Selenite Supplementation on the Risks of Type-2 Diabetes in Kuo Kondo Alel-y (KKAy) Mice under Different Status of Selenium Level

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【Introduction】 Selenium was thought to be beneficial
to cancer prevention but recently it has been reported to
increase the risks of type-2 diabetes.   Different selenium
levels before supplementation (baseline status) and
selenocompound types are presumed to contribute to
different risks.   This study clarified the effects of baseline
status and selenocompound types in selenium sup-
plementation to the risks of type-2 diabetes. 【Methods】
KKAy mice were fed high fat diet and classified into
deficient (no selenium) and sufficient (selenomethionine
0.1 ppm) groups.   After two weeks, deficient group was
divided into deficient control (n＝10) and deficient＋
selenomethionine 0.5ppm (n＝10) groups ; whereas suffi-
cient group was divided into sufficient control (n＝8),
sufficient＋selenomethionine 0.5ppm (n＝10), and suffi-
cient＋selenite 0.5ppm (n＝10) groups.   Selenometh-
ionine and selenite represented organic and inorganic
selenium.   Selenium levels, GPx activity, oral glucose
tolerance test (OGTT), insulin, and adiponectin levels
were measured. 【Results and Discussion】 Selenium
levels of sufficient group at baseline were higher compar-
ed to deficient group ［t＝1.43 p＝0.20 (plasma), t＝6.62
p＜0.01 (kidney)］.   After supplementation, selenium
levels and GPx activities of all supplemented groups
increased.   Blood glucose level of sufficient＋selenometh-
ionine group in OGTT at minute 120 (161.60±76.80mg/
dL) was significantly lower than sufficient control and