



SDI Review Form 1.6

Journal Name:	Journal of Cancer and Tumor International
Manuscript Number:	2015_JCTI_17464
Title of the Manuscript:	The Silver, Cobalt, Chromium, Iron, Mercury, Rubidium, Antimony, Selenium, and Zinc Contents in Human Bone affected by Ewing's Sarcoma
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1. Style - abstract "the role of trace elements in etiology and pathogenesis" – use articles: "the role of trace elements in the etiology and the pathogenesis" - abstract: "as well as the mass fraction of Rb is lower..." – a particle is missing: "as well as the mass fraction of Rb which is lower..." - abstract: "Moreover, significantly higher Rb/Co, Rb/Fe, and Rb/Se mass fraction ratios and values of Rb/(Co×Fe), Rb/(Co×Se), and Rb/(Fe×Se) indices are typical of the Ewing's sarcoma tissue compared to intact bone." – the phrase does not make sense (plus you can't say something is typical after you studied 6 cases of ES), so please rephrase to something like this: "Moreover, we found significantly higher values of mass fraction ratios (Rb/Co, Rb/Fe, Rb/Se) and multiplications [Rb/(Co×Fe), Rb/(Co×Se), and Rb/(Fe×Se)] in the Ewing's sarcoma tissue compared to intact bone." - 34 "that tissues of human body" – please use articles: "that the tissues of human body" - 35-36 „Particularly it concerns the chemical composition of bone tissue investigated by us in details in our previous studies" – the phrase does not make sense because of the misuse of the verb, please rephrase to something like this (if this is what you wanted to communicate): "Our detailed previous studies have shown this using a chemical composition analysis of bone tissue" - 36-37 "Bone tumors are ... tumors ... from bone tissue" –	Thank you very much for your comments and help in English. All corrections were done.



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	the phrase is rather tautological, please rephrase, for example “Bone tumors form a heterogeneous group of benign or malignant neoplastic diseases since they can derive from all the tissue components of bone (cartilage, osteoid, fibrous tissue).” - 41 “derived from red bone marrow” – please use articles “derived from the red bone marrow” - 49-50 “... a difference in incidence according to racial origin [37]. Caucasians are affected more frequently [37]” – there is no need to split the phrase: “... a difference in incidence according to racial origin, in the sense that Caucasians are affected more frequently [37].” - 51 “back,” – the term is informal, please use “spine” - 76 “reference (1) and Ewing's sarcoma (2)” – there is no need to use numeral abbreviations for the two subgroups here (reference and Ewing's sarcoma”); use them in the results section as you did - 97 “accuracy of results” – please use an article “accuracy of the results” - 104 “samples were reweighed” - please use an article “the samples were reweighed” - 123 “Fig. 1” – there is no need to abbreviate since it is still one word “Figure 1” - 184 “in intact bone and Ewing's sarcoma” – please use articles “in the intact bone and the Ewing's sarcoma tissue” - Table 5: when the column and the row contain the same element, don't use “zzzz” to indicate the nonsensical correlation, but use either blank cells or “-”; English readers may interpret “zzzz” as somebody sleeping - 195-196 “instrumental neutron activation analysis with high resolution spectrometry of long-lived radionuclides” – use the abbreviations you explained earlier “INAA-LLR” - 196 “research work” – a redundant phrase, use can use the more appropriate term “study”	
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	- 200 "AAS, ICP-AES, ICP-MS" – what do these abbreviations mean? Please explain them - 221-225 "The mean values and all selected statistical parameters were calculated for 9 trace element (Ag, Co, Cr, Fe, Hg, Rb, Sb, Se, and Zn) mass fractions (Table 1), for Rb/Co, Rb/Fe, Rb/Se, Cr/Co, Cr/Fe, and Cr/Se mass fractions ratios, for Co×Fe, Co×Se, and Fe×Se mass fractions multiplications as well as for Rb/(Co×Fe), Rb/(Co×Se), and Rb/(Fe×Se) indices (Table 3)." – this information is redundant, there reader already found it when inspecting the tables, so I would erase this phrase - 225 "In control group" – please use an article "In the control group" - 230: "From Table 2 it is observed that" – this is not English, rephrase to "Table 2 shows that..." or something similar - 231: "as well as" – misuse of the particle, replace with "while..." - 232 "in normal bone tissues" – please use an article "in the normal bone tissues" -245 "In control group" – please use an article "In the control group" - 257 "were arisen" – misuse of the verb, replace with "observed" - 260 "significantly changed" – misuse of the tense "significantly change" - 269 "are bone-seeking elements and closely associated" – please repeat the verb in order to give meaning: "are bone-seeking elements and they are closely associated" - 273 „Ewing's sarcoma continue" – misuse of the tense: "Ewing's sarcoma continues" - 273 "in a less degree" – misuse of the phrasal form, please write "to a lesser degree" - 276, 277, 283, 292 "Ewing sarcoma" – be constant and use only the form "Ewing s sarcoma"	
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	- 278 "As was found by us" – not English, please use "As we found" - 287 "mediate in the protective effects" – there is no need for the particle "in": "mediate the protective effects" - 297-298 "Instrumental neutron activation analysis with high resolution spectrometry of long-lived radionuclides" – use the abbreviation use the abbreviations you explained earlier in the text "INAA-LLR" - 301 "are significantly higher as well as the mass fraction" – you need a disjunction not a junction: "are significantly higher while the mass fraction" - 307 "tissues a trace element" – you mean "tissues the trace element" 2. Scientific content - abstract: "In malignant transformed bone tissues a trace element homeostasis is significantly disturbed" – there are many forms of malignant bone cancer, you only studied Ewing's sarcoma, so please refer only to Ewing's sarcoma (for example: "In Ewing's sarcoma transformed bone tissues the trace element homeostasis is significantly disturbed") - 36: "[3-29]" – it is great the you studied thoroughly this subject, but citing 27 of your own papers is too much - 37 „osseous mineralized" – what is it? It is not encountered in the literature - 60 "This work had three aims" – in fact, there is only one aim, namely the third one; the fact that you determined the metals and calculated the ratios served only compare normal and ES bone. So I would rephrase to something like this: "The aim of the study was to compare and to correlate the contents and selected combinations of trace element in two groups of samples (normal bone and Ewing's sarcoma tissue). For this purpose, the silver (Ag), cobalt (Co), chromium (Cr), iron	In these papers effect of gender, age, kind of bone and some other factors on 69 chemical element contents in cortical and trabecular human bone was investigated.
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	(Fe), mercury (Hg), rubidium (Rb), antimony (Sb), selenium (Se), and zinc (Zn) contents were determined in the two groups of bone tissue samples using nondestructive instrumental neutron activation analysis (INAA) with high resolution spectrometry of long-lived radionuclides (INAA-LLR)." - 70 "All studies were ..." – there is only one study, so write: "The study was ..." - you can add a short paragraph at the end of the discussion in which you can write the study limitations	
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<u>Minor</u> REVISION comments	- table names: there is no need to repeat the content of the table in the name of the table; table names should be short, easy to read and informative; suggestions: Table 1. Basic statistical parameters of mass fractions (mg/kg, dry mass basis) Table 2. The differences in means ($M \pm SEM$, mg/kg on dry mass basis) of trace element contents Table 3. Basic statistical parameters of mass fractions ratios, multiplications and indices Table 4. The differences in means ($M \pm SEM$) of mass fractions ratios, multiplications and indices - 276 "blood and red bone marrow are rich in iron [45]" – this is indeed a sure fact so there is no need to document it with a reference/citation - 284 "normal tissues" – you mean "normal bone" since you measured only bone, not other tissues like fat and muscle ethical issues-: If there are any ethical issues please clarify.	The study was approved by the Ethical Committee of the Medical Radiological Research Center, Obninsk
<u>Optional/General</u> comments	- title: generally titles should be short and informative; maybe the enumeration of all those metals in the title isn't the best idea; a more concise title would be "Heavy metal content of human bone affected by Ewing's sarcoma" or "Content of metal trace elements in human bone affected by Ewing's sarcoma" - statistics: since the sample size is very small (6 cases in one group and 27 cases in the other), the use of non-parametrical tests would have been more appropriate (Mann Whitney test instead of t-tests and Spearman correlations instead of Person's) - design: since all the 6 Ewing's sarcoma samples came from male patients, it would make sense to include in the normal group only male samples, since bone composition varies significantly among men and women	Se is not metal. Sb is half metal, There are a lot of "metal trace elements". Thus, we think that our title is not so long and very informative. In addition to Student's t-test the nonparametric Wilcoxon-Mann-Whitney <i>U</i>-test was used. More or less agreement between M and Median values of mass fraction shows that distribution is similar to normal. Thus, we can use Person's correlations. There are no significant differences in mass fraction of trace elements in bone of males and females in age from childhood up to 35 years (see Ref. 3-29)