

Name of journal: *World Journal of Radiology*

ESPS Manuscript NO: 15097

Column(s): Editorial

Metformin and cancer Technical and clinical implications for FDG-PET imaging

Selene Capitanio, Cecilia Marina, Giannuario Sambucetti, Silvia Morbelli

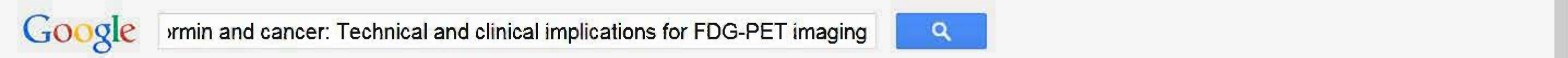
Abstract

Metformin is the most widely used hypoglycemic agent. Besides its conventional indications, increasing evidence demonstrate a potential efficacy of this biguanide as an anticancer drug. Possible mechanisms of actions seem to be independent from its hypoglycemic effect and seem to involve the interference with key pathways in cellular proliferation and glycolysis. To date, many clinical trials implying the use of metformin in cancer treatment are on-going. The increasing use of 18F-2-Fluoro-2-Deoxy-d-Glucose Positron Emission Tomography (FDG-PET) in cancer evaluation raises a number of questions about the possible interference of the biguanide on FDG distribution. In particular, the interferences exerted by metformin on AMPK pathway (the cellular energy sensor), on insulin levels and on Hexokinase could potentially have repercussion on glucose handling and thus on FDG distribution. A better comprehension of the impact of metformin on FDG

Match Overview



1	CrossCheck 87 words Tzioumis V, Kourelis. "Metformin and cancer: new applications for an old drug", <i>Medical Oncology</i> , 02/05/2011	3%
2	CrossCheck 70 words Polak, Michael. "Potential applications for biguanides in oncology", <i>Journal of Clinical Investigation</i> , 2013.	2%
3	CrossCheck 70 words Haider Mashhadi. "Metformin abolishes increased tumor F-2-fluoro-2-deoxy-D-glucose uptake associated with a high	2%
4	CrossCheck 36 words Marini, Cecilia, Barbara Solmi, Michele Massolo, Adriana Amaro, Alessia Isabella Esposito, Anna Maria Oranga, Sel	1%
5	CrossCheck 29 words "Posters", <i>Clinical and Translational Imaging</i> , 2013.	1%
6	Internet 26 words created on 25-May-2010 cancerqa.aacrjournals.org	1%
7	Internet 16 words created on 18-Mar-2013 www.ncbi.nlm.nih.gov	<1%
8	CrossCheck 11 words Olivier, A.D. "False-positive uptake on 2-(18F)-fluoro-2-deoxy-d-glucose (FDG) positron-emission tomography ...	<1%
9	Internet 11 words created on 22-Jul-2014 mct.aacrjournals.org	<1%
10	CrossCheck 10 words R G Kordecki. "AD-Targeted Therapies for Cancer", <i>Cancer</i>	<1%



网页 图片 新闻 地图 更多 ▾ 搜索工具

找到约 252,000 条结果 (用时 0.86 秒)

Google 学术 : Metformin and cancer: Technical and clinical implications for FDG-PET imaging

... guideline for tumor imaging with 18F-FDG PET/CT 1.0 - Delbeke - 被引用次数 : 322

... cancer cell proliferation—implications for a novel ... - Cantrell - 被引用次数 : 161

FDG PET and PET/CT: EANM procedure guidelines for ... - Boellaard - 被引用次数 : 532

Download - Journal of Clinical Investigation

www.jci.org/articles/view/72391/version/1/pdf/render ▾ 翻译此页

important clinical implications. Cancer cells ... PET (FDG-PET) can be used to visualize cancers. This technique serves as a measure of glucose uptake in patient tissues by coupling ... ing trials to explore the use of metformin in cancer patients and ... onance spectroscopy is a way to noninvasively image metabolites.

Metabolic features of clear-cell renal cell carcinoma ...

www.ncbi.nlm.nih.gov ▸ ... ▸ PubMed Central (PMC) ▾ 翻译此页

作者 : JH Pinthus - 2011 - 被引用次数 : 11 - 相关文章

Central to the malignant behaviour that endows cancer cells with growth advantage is ... metabolism of glucose and lipids in clear-cell RCC cells and its clinical implications. Much of the attention has been drawn to statins and metformin. ... 18F-FDG PET/CT imaging for an early assessment of response to sunitinib in ...

Glucose promotes breast cancer aggression and reduces ...

[网页](#)[图片](#)[新闻](#)[地图](#)[更多 ▾](#)[搜索工具](#)

找到约 65,500 条结果 (用时 0.54 秒)

Google 学术: Metformin and cancer: Technical and clinical implications for FDG-PET imaging

... guideline for tumor imaging with 18F-FDG PET/CT 1.0 - Delbeke - 被引用次数: 325

... cancer cell proliferation—implications for a novel ... - Cantrell - 被引用次数: 161

FDG PET and PET/CT: EANM procedure guidelines for ... - Boellaard - 被引用次数: 533

Download - Journal of Clinical Investigation

www.jci.org/articles/view/72391/version/1/pdf/render ▾ 翻译此页

important clinical implications. Cancer cells ... PET (FDG-PET) can be used to visualize cancers. This technique serves as a measure of glucose uptake in patient tissues by coupling ... ing trials to explore the use of metformin in cancer patients and ... onance spectroscopy is a way to noninvasively image metabolites.

Metabolic features of clear-cell renal cell carcinoma ...

www.ncbi.nlm.nih.gov ▸ ... ▸ PubMed Central (PMC) ▾ 翻译此页

作者: JH Pinthus - 2011 - 被引用次数: 11 - 相关文章

Central to the malignant behaviour that endows cancer cells with growth advantage is ... metabolism of glucose and lipids in clear-cell RCC cells and its clinical implications.

Much of the attention has been drawn to statins and metformin. 18F-FDG PET/CT imaging for an early assessment of response to sunitinib in ...