

## New Theories and Advances in Cancer Treatment

By Prof. Serge Jurasunas, MD(Hom), ND

### Complete References

1. Belpomme D. *Guérir du cancer ous! en proteger* (Cure or Protect Yourself from Cancer). Edition Fayard. Paris, France; 2005:166-167.
2. Warburg O. On the origin of cancer cells. *Science*. 1956;123 (3191): 309-314.
3. Bharat B, et al. Curcumin suppresses the paclitaxel-induced Nuclear Factor K-B in breast cancer cells and inhibits lung metastasis of human breast cancer in nude mice. *Cancer Therapy*. October 2005.
4. Aggarwal ML, et al. The p53 network. *J Biolo Chem*. 1998; 273:1-4.
5. Vogt SR, Haupt Y. The cellular response to p53. The decision between life and death. *Oncogene*. 1999;18: 6145-6157.
6. Miyashita T, et al. Tumor suppressor p53 is a regulator of Bcl2 and Bax gene expression in vitro and in vivo. *Oncogene*. 1994;9:1799-805.
7. Hockenberry DM, et al. Bcl2 is an inner mitochondrial membrane protein that blocks programmed cell death. *Nature* (London). 1990;348:334-336.
8. Krajewski C, et al. Reduced expression of pro-apoptotic Bax is associated with a poor response rate to combination chemotherapy and shorter survival in women metastatic breast adenocarcinoma. *Cancer Res*. 1995;55:4471-4478.
9. Naseri MH, et al. Up-regulation of Bax and up-regulation of Bcl2 during 3-nc mediated apoptosis in human cancer cells. *Cancer Cell Int*. 28 May 2015.
10. Scopa CD, et al. Bcl2/Bax ratio as a predictive marker for therapeutic response to radiotherapy in a patient with colorectal cancer. *Appl Immunocytochemistry Molecular Morphology*. Dec 2001; 9(4): 328-334.
11. Kum Kum Jha, et al. Survivin expression and targeting in breast cancer. *Surg Oncol*. June 2012.
12. Shakrokl F, et al. Survivin expression is associate with features of biologically aggressive prostate carcinoma. *Cancer*. February 15, 2004;100(4).
13. Mirza A, et al. Human survivin is negatively regulated by wild type p53 and participates in p53 dependent apoptotic pathways. *Oncogene*. 2002;21:2631-22.
14. Rivlin N, Brosh R, Rotter V. Mutation in the p53 Tumor suppressor gene. *Genes Cancer*. April 2, 2011; 4: 466-474.
15. Oren M, Rotter V. Mutant p53 Gain-of-function in cancer. *Cold Spring Harb Perspect Biol*. February 2010;2 a001107.



16. Wikstrom P, et al. Transforming Growth Factor beta is associated with angiogenesis in metastasis and poor clinical outcome in prostate cancer. *The Prostate*. September 15, 1996.
17. Chechi A, Waning DL, Mohammed KS. The role of TGFB in breast cancer bone metastasis. *Advances in Bioscience and Biotechnology*. Published online October 13, 2013.
18. Aas T, et al. Specific mutations are associated with de novo resistance to doxorubicin in breast cancer patients. *Nature Medicine*. 1996; 2811-2814.
19. Oliver, et al. Tp53 mutations are associated with shorter survival in breast cancer independently of stage, grade, and hormone receptors status. *Clin Cancer Res*. 2006.
20. Warburg O. On respiratory impairment in cancer cells. *Science*. 1956; 124 (3215): 269-70.
21. Warburg O. Uber den Stoffwechsel der carcinomzell. *Die Naturwissenschaften* 1924; 12: 1131-1139.
22. Warburg O. The Prime Cause and Prevention of Cancer. Lecture at the meeting of the Nobel-Laureates on June 30.1966 Germany. Published by Konrad Triltsch, Wurzburg, Germany 1969. English edition by Dean Burk. National Cancer Institute. USA.
23. Warburg O, Versuche an Ubeeerlebendem carcinom-Gewebe ( Methodend) *Biochem Zeitschr*. 1923;142: 317-333.
24. Demetrius LA, Coy JF, Tuszynski JA. Cancer proliferation and therapy. The Warburg effect and quantum metabolism. *Theoretical Biology Medical Modeling*. 2010;7.2.
25. Gorbachev A, Ouchida A, Queiroz AL. The effect of mutant p53 proteins on glycolysis and mitochondrial metabolism. *Molecular and Cellular Biology*. October 17, 2017; 37(24).
26. Navale AM, Paranjape AN. Glucose transporters. Physiological and pathological roles. *Biophys Rev*. March 2016; 8 (1): 5-9.
27. Eriksson M, et al. Effect of mutant p53 proteins in glycolysis and mitochondrial metabolism. *Mol Cell Biol*. 2017 Nov 28;37(24):e00328-17.
28. Szalbewski L. Expression of glucose transporters in cancer. *Biochim Biophys-Acta*. 2013; 1835:164-169.
29. Krzeslk A, et al. Expression of GLUT4 and GLUT3 glucose transporters in endometrial and breast cancers, *Pathol Oncol Res*. 2012; 18: 721-728.
30. Macheda ML, Rogers S, Best JD. Molecular and cellular regulation of glucose transporter (GLUT) proteins in cancer. *J Cell Physiol*. 2005; 202:654-662.
31. Medina RA, Owen GI. Glucose transporters. Expression, regulation, and cancer. *Biol Res*. 2002;33:9-26.
32. Alaya FR et al. GLUT1 and GLUT3 as potential prognostic markers for oral squamous cell carcinoma. *Molecules*. April 2010;15 (4): 2374-87.
33. Kuand R, et al. GLUT3 upregulation promotes metabolic reprogramming associated with antiangiogenic therapy resistance. *JCI Insight*. 2017; 2 e88815.

## **Dr. Serge Jurasunas**

**CONSULTANT FOR METABOLIC,  
DEGENERATIVE DISEASE, ANTI-AGING  
MEDICINE**

54 Years Clinical Experience Naturopathic  
Oncology

Molecular Markers Testing, P53, Telomerase  
Chemical Brain Analysis  
Immunology

Protocol and Tailored Nutritional Diet  
Innovative Therapies, Diagnostics

Telemedicine consultation via Skype, from your  
home or office, or phone calls with case follow-up  
emails

### **Contact Information:**

Email: [sergejurasunas@gmail.com](mailto:sergejurasunas@gmail.com)

Skype: Serge Jurasunas

Phone: 351 912565038

[www.sergejurasunas.com](http://www.sergejurasunas.com)

[NaturopathicOncology.blogspot.com](http://NaturopathicOncology.blogspot.com)

34. Schwartznberg-Bar-Yoseph F, Armoni M, Karmeli E. The tumor suppressor p53 down-regulates glucose transporters GLUT1 and GLUT4 gene expression. *Cancer Res.* 2004; 64 (7): 2627-33.
35. Cen Zhang, Juan Liu, Zhaohui Feng. Tumor associate mutant p53 drives the Warburg effect. *Nature Communication* 4. 2013; Article number 2935.
36. Bensaad K, et al. Tigar, a p53-inducible regulator of glycolysis and apoptosis. *Cell.* 2006; 126 (1): 107-20.
37. Hiroshi K, et al. Glycolytic enzymes can modulate cellular life span. *Cancer Res.* 2005; 65 (1):177-85.
38. Matoba S, et al. p53 regulates mitochondrial respiration. *Science.* 2006;312 (5780): 1650-3.
39. Ma W, et al. A pivotal role for p53. Balancing aerobic respiration and glycolysis. *J Bioenergy Biomenhr.* 2007;39 (3):243-6.
40. Shay JW, Bacchetti S. A survey of telomerase activity in human cancer. *European Journal of Cancer.* April 1997;33(5): 789-791.
41. Aubert G, Landsorp PM. Telomeres and Aging. *Physiological reviews.* 2008;88:557-579.
42. Kim NW, et al. Specific association of human telomerase with immortal cells and cancer. *Science.* 1994; 266: 2011-5.
43. Soria JC, et al. Molecular detection of telomerase-positive circulating epithelial cells in metastatic breast cancer patients. *Clin Cancer Res.* 1999; 917-5.
44. Sapi E, Okpokwasili NI, Rutherford T. Detection of telomerase positive circulating epithelial cells in ovarian cancer patients. *Cancer Detect Prev.* 2002; 26: 158-67.
45. Goldkorn A, et al. Circulating tumor cell telomerase activity as a prognostic marker for overall survival in SWOG0421. A phase III metastatic castration-resistant prostate cancer trial. *Intl Journal of Cancer.* 2015;136:1856-62.
46. Mohammed A, et al. Roles of telomerase in cancer and advances in telomerase targeted therapies. *Genome Med.* 2016; 869.
47. Lieberman P. Brothers-in-Arms: How p53 and telomeres work together to stave off cancer. *Science Daily* (the Wistar Institute). January 15, 2016.
48. Akeshuma R, et al. Telomerase activity and p53-dependent apoptosis in ovarian cancer cells. *BJC.* 2001; 84 (11):1551-1555.
49. Hoas A, et al. Telomerase activity correlates with tumor aggressiveness and reflex therapy effect in breast cancer. *Int. Journal Cancer.* 1998;74:8-12.
50. Brittny-Shea H, Wright WE, Show JW. Telomerase and Breast Cancer. *Breast Cancer Research.* 2001;3:146-149.



51. Dobja-Kubica K, et al. Telomerase activity in non-small-cell-lung cancer. *Polish Journal of Thoracic and Cardiovascular Surgery.* 2016;13 (1): 15-20.
52. Hermann PC, et al. Distinct populations of cancer stem cells determine tumor growth and metastatic activity in human pancreatic cancer. *Cell Stem Cell.* 2007;1:313-23.
53. Colak S, Medema JP. Cancer stem cells- important players in tumor therapy resistance. *FEBS Journal.* 2014;281(21):4779-47791.
54. Ponte PM, Caicedo A. Stemness in cancer. Stem Cells, Cancer Stem Cells, and their Microenvironment. *Stem Cells International.* 2017: Article ID5619472.
55. Del Bufalo D, et al. Involvement of hTERT in apoptosis induced by interference with Bcl2 expression in function. *Cell Death Differ.* 2005;12(14):29-38.
56. Bernuidez Y, et al. Telomerase confers resistance to caspase-mediated apoptosis. *Clin Intervent Aging.* 2006;1/15567.

57. Jurasunas S, Taylor OG. How to Target Mutant p53 in a case of Multiple Cancer Recurrence. *Townsend Letter*. August/Sept.2010; 68-71.
58. Cosan DT, Soyocak A. Inhibiting telomerase activity and inducing apoptosis in cancer cells by several natural food compounds. In: Bibo L, editor. *Review on Selected Topics of Telomere Biology*. Rijeka, Croatia; InTech: 2010;123-148.
59. Keating E, Martel F. Antimetabolic effects of polyphenols in breast cancer cells. Focus on glucose uptake and metabolism. *Frontiers in Nutrition*. April 16, 2018.
60. Vallianou NG, et al. Potential anticancer Properties and Mechanisms of action of curcumin. *Anticancer Research*. February 2015; 35(2): 645-65.
61. Halysz H, Lipinska N, Rubis B. Curcumin inhibits telomerase activity through human telomerase reverse transcriptase (TERT) in the MCF-7 breast cancer cell line. *Cancer Letter*. 2012;184(1):1-6.
62. Chakrabaity S, et al. Inhibition of telomerase activity and induction of apoptosis by curcumin in K-526 cells. *Molecular Mechanisms of Mutagenesis*. 2006;596:81-90.
63. Jagodeesh S, et al. Genistein represses Telomerase activity via both transcriptional and posttranscriptional Mechanism in the human cancer prostate. *Cell Tumor and Stem Cell Biology*. February 2006.
64. Yanyan Li, et al. Targeting cancer stem cells by curcumin and clinical applications. *Cancer Letter*. January 2014;346 (2).
65. Huang W, Wan C, Luo Q. Genistein inhibits cancer stem cell-like properties and reduced chemoresistance of gastric cancer. *Intl Journal Mol Sci*. March 15, 2014;15(3):3432-3443.
66. Jurasunas S. NK cell-based immunotherapy in the treatment of cancer using a new Arabinoxylan compound. *Townsend Letter*. August/September 2019: 33-41.
67. Badr NK, et al. Arabinoxylan Rice Bran (MGn-3/Biobran enhances radiotherapy in animals bearing Ehrlich ascites carcinoma. *Journal of Radiation Research*. 2019; 1-12.
68. Lanzilli G, et al. Resveratrol down-regulates the growth of telomerase activity of breast cancer cells in vitro. *Int Journal Oncol*. March 2006;28:641-8.
69. Sadova D, Whitlock E, Kane SE. The green tea polyphenol epigallocatechin-3-gallate inhibits telomerase and induce apoptosis in drug-resistant lung cancer. *Biochemical and Biophysical Communication*. 2007;360:233-237.
70. Sun L, Wang X. Effects of Allicin on both telomerase activity and apoptosis in gastric cancer SGC 7901 cells. *World J Gastroenterol*. 2003;9(9):1930-4.
71. Moon D, et al. Sulphoraphane decrease viability and telomerase activity in hepatocellular carcinoma.

Hep 3B cells through the reactive oxygen species-dependent pathways. *Cancer Letter*. September 2010; 295(2):60-66.

72. Yurtcu E, et al. Effects of silymarin and silymarin-doxorubicine applications on telomerase activity of human hepatocellular carcinoma cell line Hep G2. *J Buon*. May 2015;20(2): 555-561 (Journal of BUON in the official journal of the Balkan Univ of Oncology).

73. Oh NI, et al. Blocking Telomerase by dietary polyphenols is a major mechanism for limiting the growth of human cancer cells in vitro and in vivo. *Cancer Res*. 2003;63:824-830.

74. Pavese JM, Farmer RL, Bergan RC. Inhibition of cancer cell invasion and metastasis by genistein. *Cancer Metastasis Rev*. 2010; 29:465-482

