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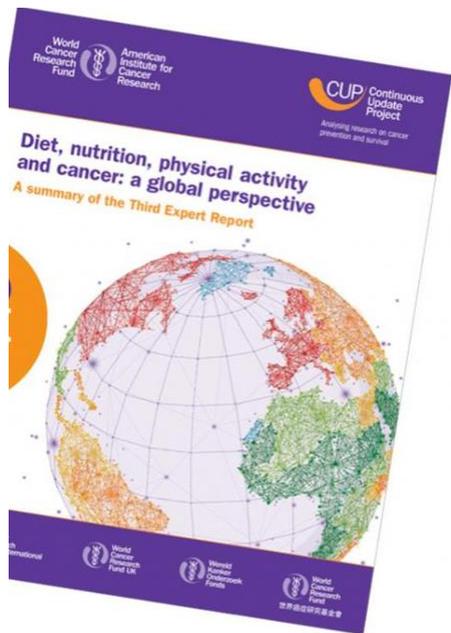
Fachtagung 2019  
«Supplemente -  
Sinn und Nutzen»  
am 13. September 2019

Programm & Anmeldung



# «Compléments Alimentaires : sens et bénéfiques»

Drs Jacquelin-Ravel Nathalie, Lausanne, [njacquelin@svmed.ch](mailto:njacquelin@svmed.ch)



There is strong evidence from randomised controlled trials that high-dose beta-carotene supplements may increase the risk of **lung cancer** in some people. There is no strong evidence that dietary supplements, **apart from calcium for colorectal cancer**, can reduce cancer risk.

For most people consumption of the right food and drink is more likely to protect against cancer than dietary supplements

### More detail

There is convincing evidence that consumption of high-dose beta-carotene supplements is a cause of lung cancer in current and former smokers. Consuming beta-carotene supplements or foods containing beta-carotene is unlikely to have a substantial effect on the risk of prostate cancer. Consuming beta-carotene supplements is unlikely to have a substantial effect on the risk of non-melanoma skin cancer. Consuming calcium supplements probably protects against colorectal cancer

A dietary supplement is a product intended for ingestion that contains a ‘dietary ingredient’ intended to achieve levels of consumption of micronutrients or other food components beyond what is usually achievable through diet alone.



The Panel is confident that for most people consumption of the right food and drink is more likely to protect against cancer than consumption of dietary supplements.

There is evidence from clinical trials that high-dose beta-carotene supplements may increase the risk of lung cancer in current and former smokers. However, these findings may not apply to the general population. Further details of evidence and judgements can be found in [Exposures: Other dietary exposures](#).

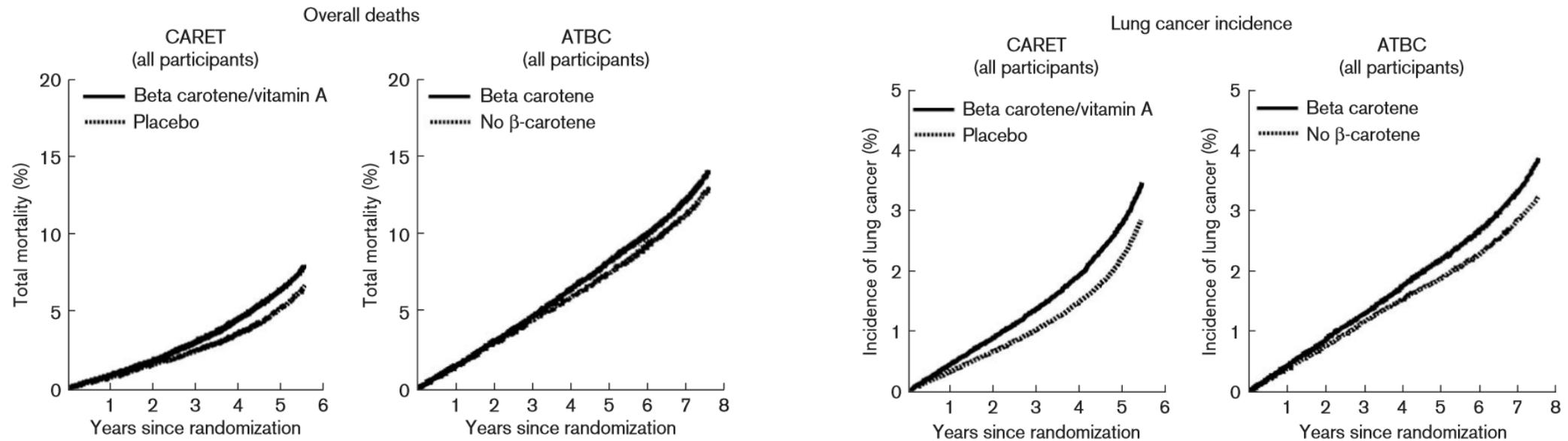
Disparity between the beneficial effects of micronutrients from foods observed in long-term epidemiological dietary data and the lack of beneficial effects observed in short-term supplements trial data can lead to uncertainty as to the effect of dietary supplements on cancer risk [91].

## **Chemoprevention of lung cancers: lessons from CARET, the beta-carotene and retinol efficacy trial, and prospects for the future**

Gilbert S. Omenn

- Les deux plus larges études de prévention du cancer du poumon chez des fumeurs :
  - ATBC : Alpha– tocophérol (vitamine E: 50 mg ) et Béta-Carotène (20mg).
    - 29 133 hommes
    - Fumeurs
    - 50-69 ans
  - CARET : Béta carotène (30 mg) et Retinol (25 000UI):
    - 14 254 hommes et femmes
    - fumeurs actifs ou anciens
    - Étude stoppée car 28% d'augmentation de cancer du poumon et 18% de la mortalité
- **Conclusion: augmentation de l'incidence** de cancer du poumon et de la **mortalité** dans les 2 études  
Gilbert S. Omenn . European Journal of Cancer Prevention 2007,  
16:184-91

# Augmentation de l'incidence du cancer du poumon et Mortalité



# The Effect of Vitamin C (Ascorbic Acid) in the Treatment of Patients with Cancer: A Systematic Review

Gwendolyn N.Y. van Gorkom \*, Eline L. Lookermans , Catharina H.M.J. Van Elssen  and Gerard M.J. Bos

Hypothèse : carence en vitamine C des patients sous chimiothérapie

⇒ La vitamine C est un stimulateur du système immunitaire

⇒ Supplémentation en Vitamine C

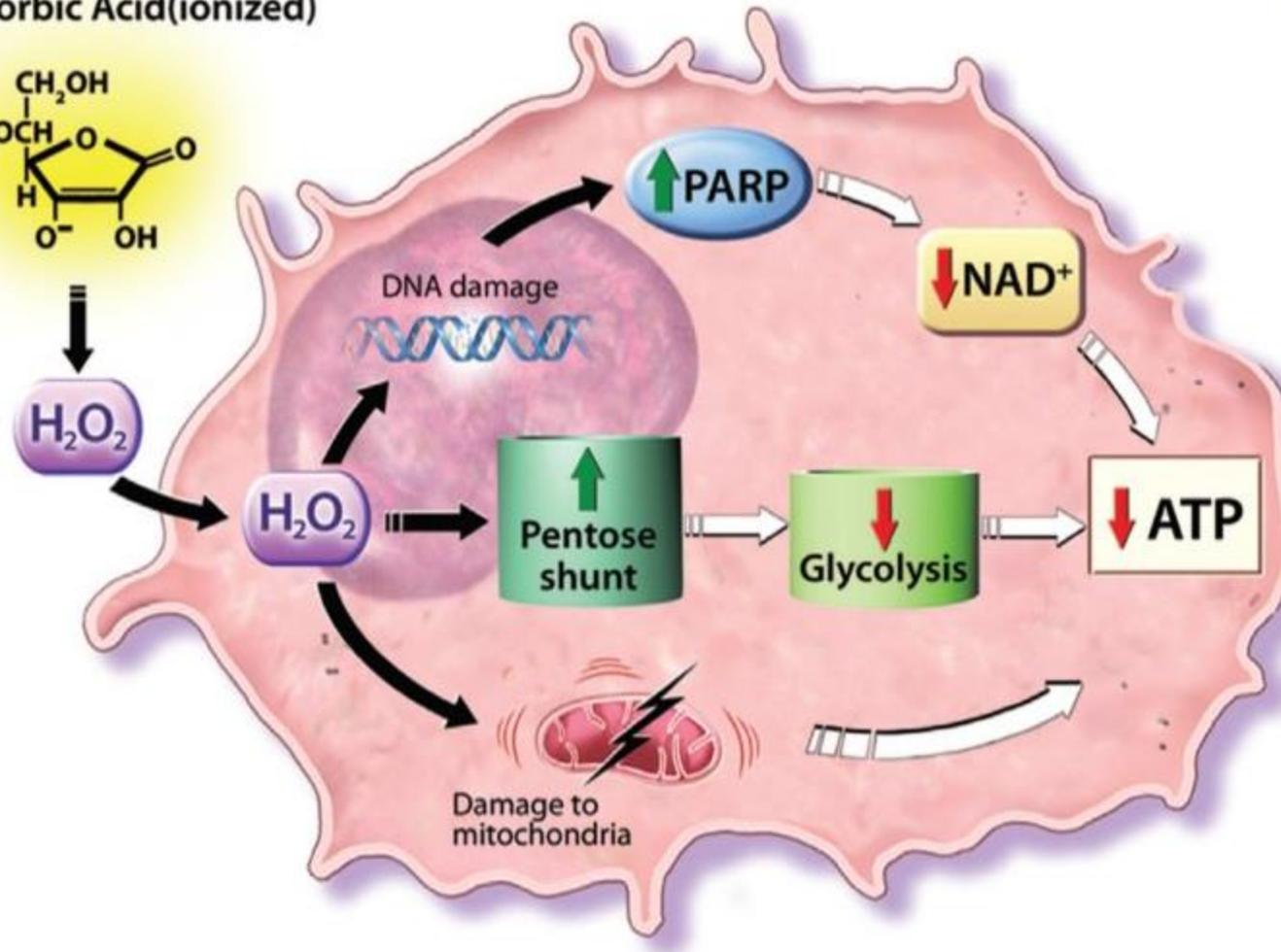
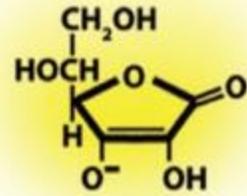
⇒ 19 études incluses mais 4 études utilisées

⇒ Pas de preuve que l'adjonction de Vitamine C améliore la survie, la qualité de vie ou le Performance Status

⇒ Qualité des études publiées basse : hétérogénéité des patients ( nouveau diagnostic ou ancien), des interventions (co-administration)

⇒ Mais peu d'effet secondaire : 2 effets sérieux (hypokaliémie, calcul rénal)

Ascorbic Acid(ionized)



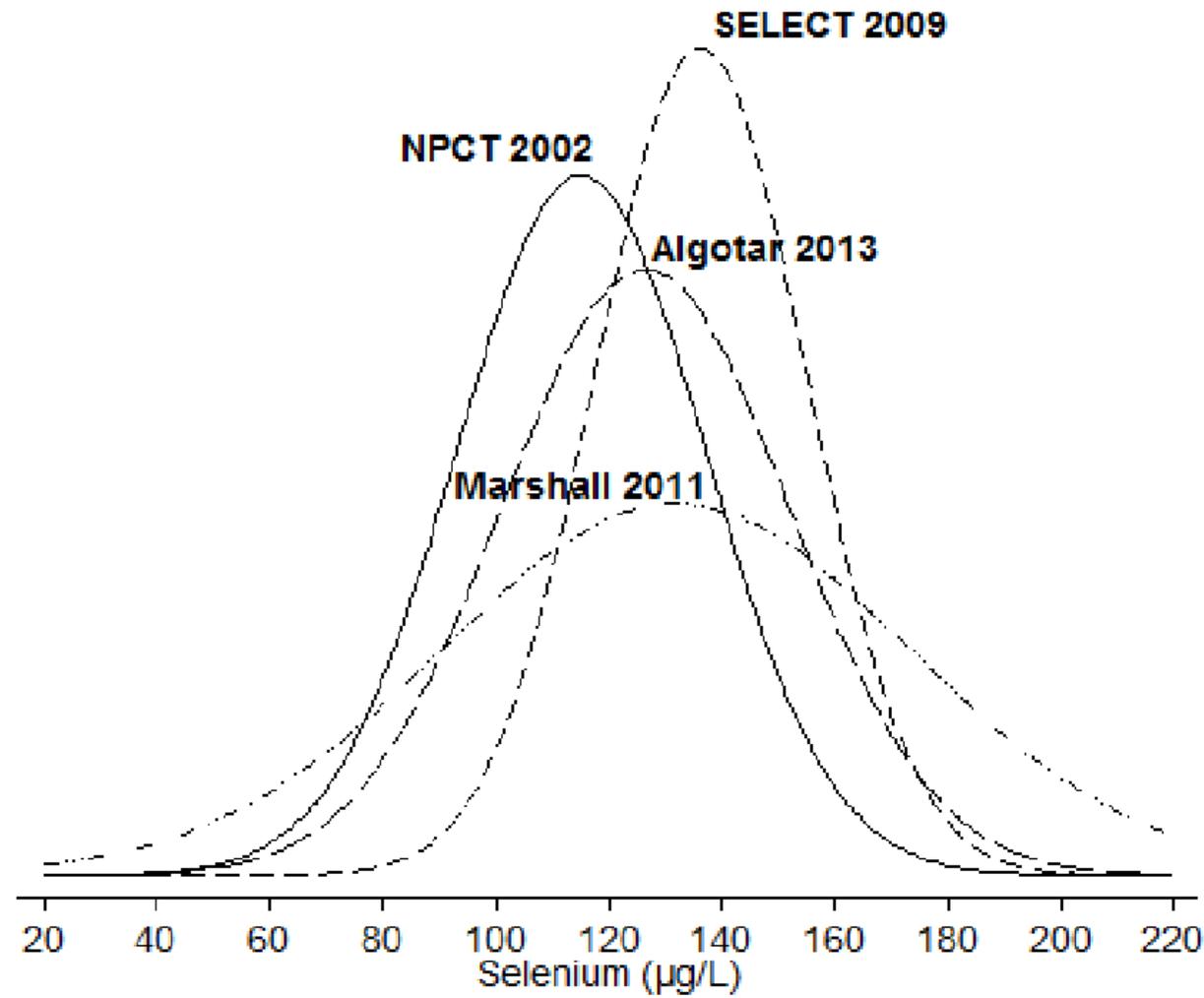
## Nutritional Supplements and Cancer: Potential Benefits and Proven Harms

- Les suppléments Nutritionnels sont largement utilisés parmi les patients atteints de cancer, ils les perçoivent Comme des agents anti-cancers et anti-toxicité.
- Bêta-carotène et Vitamine E en supplémentation augmente le risque de cancer pulmonaire, de la prostate, de l'estomac, colorectal et augmente la mortalité globale dans la population générale.
- Vitamine E et Bêta-carotène peuvent réduire la toxicité induite par la radiothérapie , mais il existe une augmentation de la récurrence, particulièrement chez les fumeurs.
- Les antioxydants ont des effets variables sur la toxicité induites des chimiothérapies, manque de données.
- Vitamine D et oméga 3 sont régulièrement testés comme traitement adjuvant pour optimiser la réponse aux Traitements.



## Selenium for preventing cancer (Review)

Vinceti M, Filippini T, Del Giovane C, Dennert G, Zwahlen M, Brinkman M, Zeegers MPA, Horneber M, D'Amico R, Crespi CM



# Administration de selenium autour de 200ug/j augmente le risque de:

- ✓ Cancer de la peau (non type melanome)
  - ✓ Cancer avancé de la prostate
    - ✓ Diabète de type 2
    - ✓ Anomalies cutanées

# Les conclusions sur le Sélénium:

- Toutes les études randomisées de hautes qualité montrent une absence d'effet de prévention sur des cancers spécifiques comme le cancer de la prostate
- Certaines études démontreraient même une augmentation
  - du risque de haut grade des cancers de la prostate
  - De diabète de type 2
  - Pathologies dermatologiques

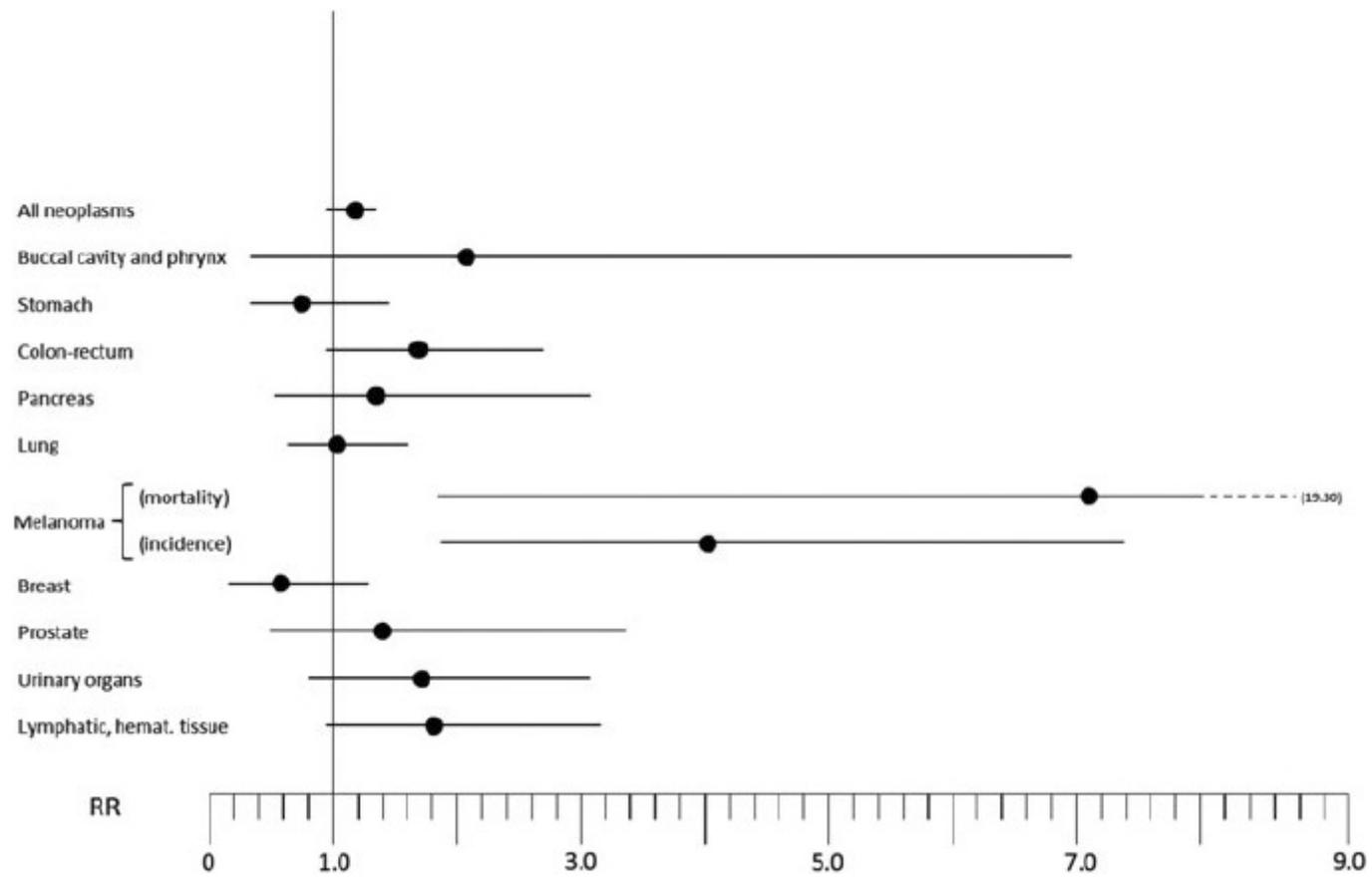
**Table 1:** Median Values ( $\mu\text{g/l}$ ) of Se Chemical Species Identified in Blood (Serum) and Cerebrospinal Fluid (CSF) of 24 Human Subjects, with Their Squared Correlation Coefficients ( $r^2$ ) (Published and Unpublished Data from Solovyev, Berthele, and Michalke (32))

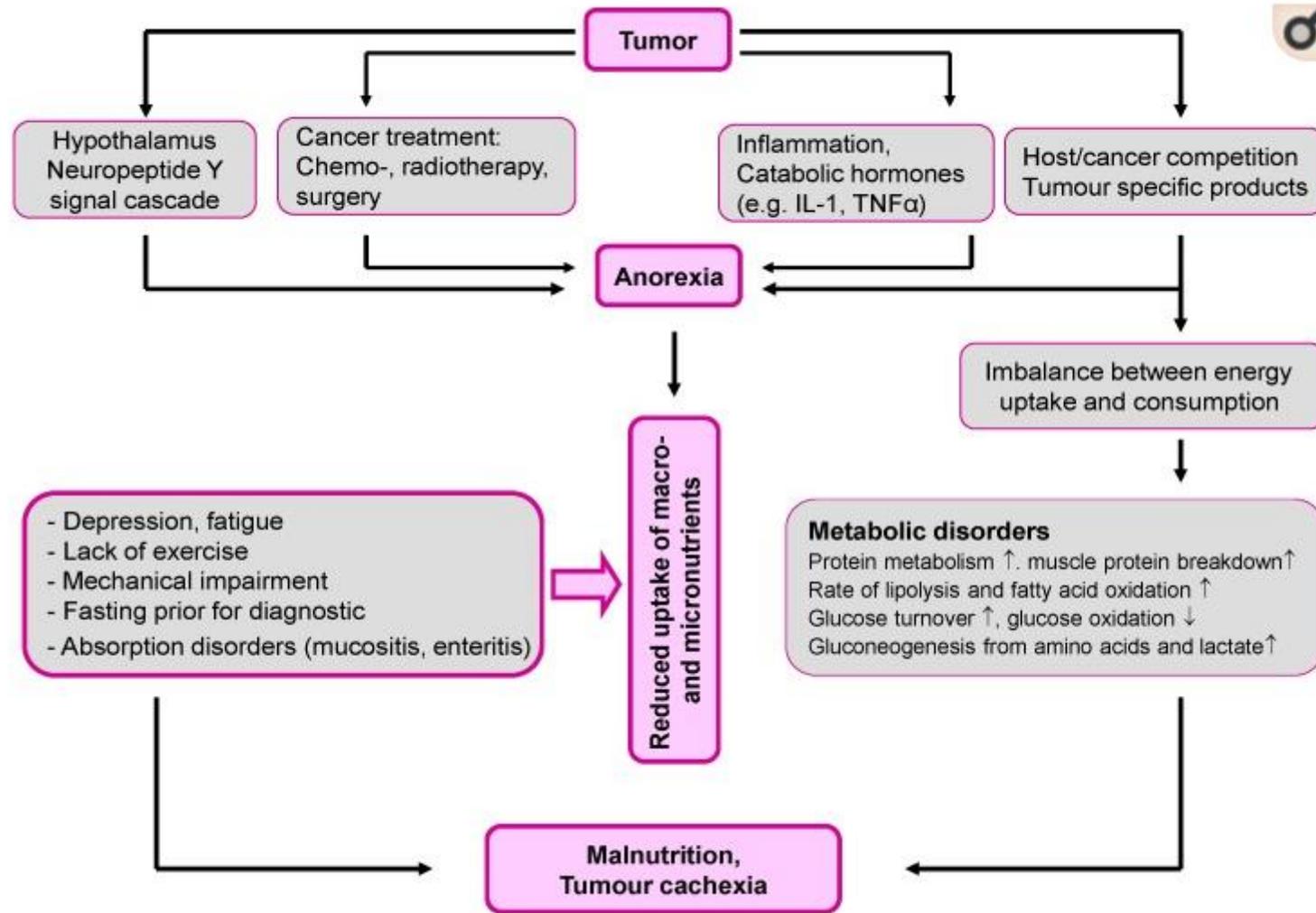
Se Species	Serum	CSF	$r^2$
Se-cysteine	<LoD <sup>1</sup>	<LoD	
Selenoprotein P	5.19	0.474	0.037
Glutathione peroxidase	4.27	0.036	0.384
Se-methionine	0.23	<LoD	
Thioredoxin reductase	1.64	0.035	0.629
Human serum albumin Se (HSA-Se)	18.03	0.068	0.172
Selenite	12.25	0.046	0.040
Selenate	<LoD	<LoD	0.009
UF <sup>2-1</sup>	<LoD	<LoD	
UF-2	<LoD	<LoD	
UF-3	<LoD	<LoD	
UF-4	6.34	<LoD	
Total	58.39	0.861	0.0002

<sup>1</sup>Limit of detection.

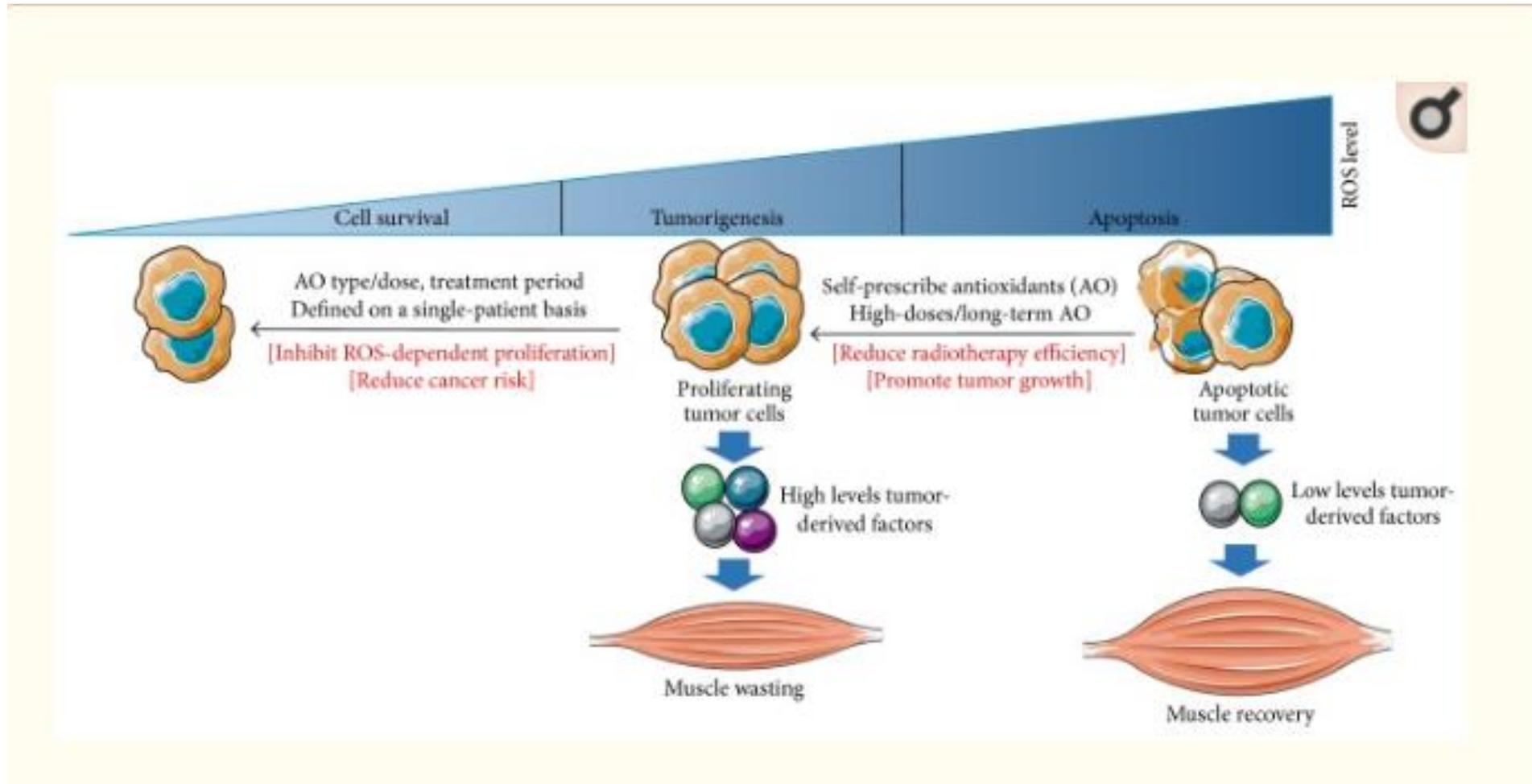
<sup>2</sup>Unknown form.

## Risque Relatif de certains cancers : consommation d'eau enrichie en Selenium Inorganique hexavalent 8ug/l)





# Model hypothétique du rôle bénéfique ou négatif de l'interaction des antioxydants avec la tumeur



*Review*

## **Micronutrients in Oncological Intervention**

Uwe Gröber <sup>1,\*</sup>, Peter Holzhauer <sup>1,2,3</sup>, Klaus Kisters <sup>1,4</sup>, Michael F. Holick <sup>5</sup>  
and Irenäus A. Adamietz <sup>6</sup>

*Review Article*

## **Antioxidant Intake and Antitumor Therapy: Toward Nutritional Recommendations for Optimal Results**

**Nuria Mut-Salud,<sup>1</sup> Pablo Juan Álvarez,<sup>1</sup> Jose Manuel Garrido,<sup>2</sup> Esther Carrasco,<sup>1</sup>  
Antonia Aránega,<sup>1</sup> and Fernando Rodríguez-Serrano<sup>1</sup>**

<sup>1</sup>*Institute of Biopathology and Regenerative Medicine, University of Granada, 18071 Granada, Spain*

<sup>2</sup>*Department of Cardiovascular Surgery, Virgen de las Nieves Hospital, 18014 Granada, Spain*

Correspondence should be addressed to Fernando Rodríguez-Serrano; fernrs@ugr.es

Received 22 June 2015; Accepted 12 August 2015

## **Nutritional Supplements and Cancer: Potential Benefits and Proven Harms**

*Michelle Harvie, PhD, SRD*

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Review

# Micronutrient Deficiencies in Medical and Surgical Inpatients

Mette M Berger <sup>\*</sup>, Olivier Pantet , Antoine Schneider and Nawfel Ben-Hamouda 

Service of Adult Intensive Care Medicine and Burns, Lausanne University Hospital (CHUV), BH 08.612,  
Rue du Bugnon 46, 1011 Lausanne, Switzerland

\* Correspondence: Mette.Berger@chuv.ch; Tel.: +41-21-3142095

**Table 1.** Micronutrient strategy in critically ill patients admitted to the Lausanne multidisciplinary ICU, according to disease and nutrition therapy.

Situation	Stress Profile in High Risk Patients in Organ Failure *	Parenteral Nutrition (and Combined Feeding)	Enteral Nutrition
Micro-Nutrients	1 vial multi-trace element (Addaven <sup>®</sup> , Fresenius Kabi, Oberdorf, Switzerland) + 5 mg Zinc + 1 vial multi-vitamin (Cernevit <sup>®</sup> , Baxter, Volketswil, Switzerland) + 500 mg vitamin C + 100 mg vitamin B1	Same as stress profile	Multi-micronutrient providing DRI needs (Supradyn <sup>®</sup> , Roche, Basel, Switzerland)
Duration Route	Diluted in 100 ml de NaCl 0.9% over 6 hours from admission for first 6 days during night shift	Daily with parenteral nutrition	Daily Mixed with enteral feeding

\*: High risk conditions include shock (cardiogenic, septic, hypovolemic), pancreatitis, severe hepatopathy, major trauma, organ transplant, and malnutrition.

# Un complément alimentaire est un principe actif sur des mécanismes métaboliques

C'est une prescription au même titre qu'un médicament, il doit donc être indiqué et surveiller.



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