

*et al.*¹ used a new electrochemiluminescent immunoassay (ECLIA) for Cyfra 21-1 measurements in the serum of patients with squamous cell carcinomas of the head and neck. The advantages, or maybe also disadvantages, of the new ECLIA in contrast to the well accepted ELISA for determination of the Cyfra 21-1 serum concentration are not discussed by the authors, apart from the remark that the sensitivity of ECLIA seems to be slightly higher. ELISA is a rapid, sensitive, and reproducible technique, as well. Since with ECLIA a new technique is described, more detailed information concerning the performance of the test would be appropriate.

As mentioned previously,⁵ no survival analysis should be performed with patients suffering from squamous cell carcinomas of different tumour sites in the head and neck area, because the survival probability per se strongly depends on the tumour site. This might explain the lack of statistical significance in the difference between the Cyfra 21-1 positive and the Cyfra 21-1 negative group, described by Deng *et al.*¹

In conformity with Deng *et al.*,¹ an increase of the Cyfra 21-1 serum concentration in case of disease progression, in terms of residual tumour progression, recurrency, and especially in terms of appearance of distant metastasis has previously been described. Also, a decrease of the Cyfra 21-1-serum concentration after therapy in patients with squamous cell carcinomas of the head and neck has been seen earlier.⁴ Cyfra 21-1 is a well accepted tumour marker in non-small-cell lung cancer.⁶ The controversy about the usefulness of Cyfra 21-1 as serum tumour marker in head and neck squamous cell carcinomas is probably due to difficulties to find the appropriate cut-off level.⁷ Cyfra 21-1 serum levels in patients with head and neck cancer are generally lower than in patients with lung cancer and they are often even equivalent to levels which are considered normal in lung cancer patients. Additionally, a wide range of Cyfra 21-1 serum levels were observed in patients at the time of primary tumour diagnosis.^{2,4} Also, the Cyfra 21-1 serum levels vary widely in healthy persons.^{8,9} Cytokeratins are not organ specific, and they appear in all epithelial tumours, as well as in normal epithelium. This is a limitation on the tumour marker potential of Cyfra 21-1.^{10,11}

In conclusion, the Cyfra 21-1 serum concentration is not a suitable tumour marker for diagnosis of squamous cell carcinomas of the head and neck, but an increase of Cyfra 21-1 in serial measurements indicates impending disease progression in the individual patient. Therefore, the Cyfra 21-1 serum concentration is a good marker for follow-up in patients with squamous cell carcinoma of the head and neck, and in case of an upward trend of Cyfra 21-1 in the serum, staging procedures are recommended.

Christiane Kuropkat, M.D. and Jochen A. Werner, M.D.

Department of Otorhinolaryngology – HNS
Philipps University
Deutschhausstr. 3

35037 Marburg
Germany

E-mail: kuropkat@med.uni-marburg.de

References

- Deng YF, Chen P, Lin YZ, Le JZ, Wu XL, Yu MQ, *et al.* Analytical and clinical evaluation of CYFRA 21-1 by electrochemiluminescent immunoassay in head and neck squamous cell carcinoma. *J Laryngol Otol* 2003;**117**:190–4
- Doweck I, Barak M, Greenberg E, Uri N, Kellner J, Lurie M, *et al.* Cyfra 21-1. A new potential tumor marker for squamous cell carcinoma of head and neck. *Arch Otolaryngol Head Neck Surg* 1995;**121**:177–181
- Maass JD, Hoffmann-Fazel A, Goeroegh T, Hoffmann M, Meyer J, Gottschlich S, *et al.* Cyfra 21-1: A serological help for detection of distant metastases in head and neck cancer. *Anticancer Res* 2000;**20**:2241–4
- Kuropkat C, Lippert BM, Werner JA. Follow-up with Cyfra 21-1 in patients with squamous cell carcinomas of the head and neck. *Oncology* 2002;**63**:280–5
- Kuropkat C, Rudolph P, Frahm SO, Parwaresch R, Werner JA. Proliferation marker Ki-S11 – a prognostic indicator for squamous cell carcinoma of the hypopharynx. *Virchows Arch* 1999;**435**:590–5
- Rastel D, Ramaioli A, Cornille F, Thirion B. Cyfra 21-1, a sensitive and specific new tumor marker for squamous cell lung cancer: Report of the first European Multicenter Evaluation. *Eur J Cancer* 1994;**30A**:601–6
- Niemann AM, Goeroegh T, Gottschlich S, Lippert BM, Werner JA. Cut-off value determination of Cyfra 21-1 for squamous cell carcinoma of the head and neck. *Anticancer Res* 1997;**17**:2859–60
- Yen TC, Lin WC, Kao CH, Cheng KY, Wang SJ. A study of a new tumour marker, Cyfra 21-1, in squamous cell carcinoma of the head and neck, and comparison with squamous cell carcinoma antigen. *Clin Otolaryngol* 1998;**23**:82–6
- Lee JK, Hsieh JF, Tsai SC, Ho YJ, Sun SS, Kao CH. Comparison of Cyfra 21-1 and squamous cell carcinoma antigen in detecting nasopharyngeal carcinoma. *Ann Otol Rhinol Laryngol* 2001;**110**:775–8
- Franke WW, Schmid E, Osborn M, Weber K. Different intermediate-sized filaments distinguished by immunofluorescence microscopy. *Proc Natl Acad Sci USA* 1978;**75**:5034–8
- Bongers V, Braakhuis BJM, Snow GB. Circulating fragments of cytokeratin 19 in patients with head and neck squamous cell carcinoma. *Clin Otolaryngol* 1995;**20**:479–82

Author's reply

Dear Sirs,

We thank Dr Kuropkat for the comments on our paper.¹

Up to now, the CYFRA 21-1 serum concentration was measured using a dot-blot assay, IRMA, ELISA, and ECLIA. In our study, we utilized ECLIA. ECLIA is a new method for the determination of cytokeratin 19(CYFRA 21-1) in the Elecsys 2010 immunoassay system. It provides a new noninvasive adjunct to test the CYFRA 21-1 concentration of human serum, tissue fluid and urine. We introduce it as follows:

Elecsys 2010 system

The Elecsys® 2010 analyser [Boehringer Mannheim (BM)] is based on the ability of the electrochemiluminescent label molecule, a tris (2,2'-bipyridyl)-ruthenium (II) complex, to be repeatedly excited by tripropylamine, thus leading to an amplification of

light signal that allows the high speed and dynamics of signal generation and measurement. It provides the first test result in 18 minutes and has a maximum throughput of 86 tests per hour. The system can develop both competitive and sandwich-format electrochemiluminescent assays.

The Elecsys 2010 system is a fully automated immunoassay analyser that can work in batch, random, or stat modes. The automated process consists of the aspiration of the sample, reagent and microparticles, a first incubation at 37°C, additional reagent pipetting, a second incubation at 37°C, reaction mixture aspiration, and measurement. The analyser also includes a workstation for system programming and can be interfaced to various laboratory computers.

Elecsys 2010 CYFRA 21-1 assay

No pre-analytical preparation of reagents is required for the Elecsys 2101 CYFRA 21-1 assay (cat. no. 1820966). In a first incubation of nine minutes, 20 µL of sample, a biotinylated monoclonal cytokeratin 19-specific antibody, and a monoclonal cytokeratin 19-specific antibody labelled with a ruthenium complex [a tris(2,2'-bipyridyl)ruthenium (II) complex] react to form a sandwich complex. After the addition of streptavidin-coated microparticles, there is a second incubation for nine minutes, and the complex becomes bound to the solid phase via the interaction of biotin and streptavidin. The reaction mixture is aspirated into the measuring cell where the microparticles are magnetically captured onto the surface of the electrode. Unbound substances are then removed with a phosphate-triethylamine buffer (pH 6.8; Procell®, BM). Application of a voltage to the electrode then induces chemiluminescent emission, which is measured by a photomultiplier.

We agree with Dr Kuropkat regarding the role of CYFRA 21-1 for follow-up in patients with head and neck squamous cell carcinoma (HNSCC). The data including our study have shown that CYFRA 21-1 is a good marker for monitoring therapeutic effect, follow-up and prognostic value in patients with HNSCC.²⁻⁵ Furthermore, many studies have shown that CYFRA 21-1 is useful for diagnosis of HNSCC.⁵⁻¹⁰ We also believe that CYFRA 21-1 is an adjunct for the diagnosis of HNSCC. The CYFRA 21-1 ECLIA provides a useful tool for the surveillance of patients suffering from carcinoma of the head and neck.

We have an attention on the difficulty of identification of the appropriate cut-off level. Different methods have different recommended value. Certainly, the different cut-off value ought to be established according to the statistic analysis of an ample study of different tumours.

We support Dr Kuropkat's opinion that the survival rate depends on the tumour site. Our study also identified this idea, although other explanations are possible. Moreover, we have been investigating the survival rate of our cases studied according to different tumour sites.

Yan fei Deng, M.D.
Department of Otolaryngology
Xiamen Zhongshan Hospital
No. 209 Hubin South Road
Xiamen, Fujian 361004
People's Republic of China

E-mail: dyanfei@hotmail.com

References

- Deng YF, Chen P, Lin YZ, Le JZ, Wu XL, Yu MQ, *et al.* Analytical and clinical evaluation of CYFRA 21-1 by electrochemiluminescent immunoassay in head and neck squamous cell carcinoma. *J Laryngol Otol* 2003;**117**:190-4
- Shimada H, Nabeya Y, Okazumi S, Matsubara H, Miyazawa Y, Shiratori T, *et al.* Prognostic significance of CYFRA 21-1 in patients with esophageal squamous cell carcinoma. *J Am Coll Surg* 2003;**196**:573-8
- Doweck I, Barak M, Uri N, Greenberg E. The prognostic value of the tumour marker Cyfra 21-1 in carcinoma of head and neck and its role in early detection of recurrent disease. *Br J Cancer* 2000;**83**:1696-701
- Banal A, Hacene K, Berthelot-Ruff E, Mahe E, Fontana X, Pichon MF. Comparison of Cyfra 21-1 and SCC assays in head and neck tumours. *Tumour Biol* 2001;**22**:27-35
- Kawaguchi H, Ohno S, Miyazaki M, Hashimoto K, Egashira A, Saeki H. CYFRA 21-1 determination in patients with esophageal squamous cell carcinoma: clinical utility for detection of recurrences. *Cancer* 2000;**89**:1413-7
- Hoffmann-Fazel A, Hoffmann M, Gottschlich S, Maass JD, Rudert H, Maune S. Cyfra 21-1 in diagnosis of distant metastases of head and neck carcinoma. *Anticancer Res* 2003;**23**:917-20
- Tai CJ, Liu FY, Liang JA, Yang SN, Tsai MH, Kao CH. Comparison of CYFRA 21-1 and tissue polypeptide specific antigen (TPS) for detecting nasopharyngeal carcinoma. *Anticancer Res* 2002;**22**:3793-6
- Lee JK, Hsieh JF, Tsai SC, Ho YJ, Sun SS, Kao CH. Comparison of CYFRA 21-1 and squamous cell carcinoma antigen in detecting nasopharyngeal carcinoma. *Ann Otol Rhinol Laryngol* 2001;**110**:775-8
- Nagler RM, Barak M, Peled M, Ben-Aryeh H, Filatov M, Laufer D. Early diagnosis and treatment monitoring roles of tumor markers Cyfra 21-1 and TPS in oral squamous cell carcinoma. *Cancer* 1999;**1018**-25
- Yen TC, Lin WY, Kao CH, Cheng KY, Wang SJ. A study of a new tumour marker, CYFRA 21-1, in squamous cell carcinoma of the head and neck, and comparison with squamous cell carcinoma antigen. *Clin Otolaryngol* 1998;**23**:82-6

Naseptin® Nasal Cream 'contains peanut oil'

Dear Sirs,

A recent Chief Medical Officer's Update (No. 36; August 2003)¹, sent to all practising doctors in England, included an alert regarding topical medicines containing peanut (arachis) oil. Such products are clearly labelled as containing this refined ingredient.

The alert highlighted a recent study in children that suggested sensitization to peanuts may be caused by the application of creams containing peanut oil to inflamed skin.² It also mentioned an earlier study that demonstrated the persistence of small amounts of allergenic protein in peanut oil despite refinement.³

Although the Committee on Safety of Medicines has determined that there is insufficient evidence to conclude that exposure to topical medicines contain-