

Assessment of induced rat mammary tumour response to chemotherapy using the apparent diffusion coefficient of tissue water as determined by diffusion-weighted 1H-NMR spectroscopy in vivo.

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Titre	Assessment of induced rat mammary tumour response to chemotherapy using the apparent diffusion coefficient of tissue water as determined by diffusion-weighted 1H-NMR spectroscopy in vivo.
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R�sum� en anglais	<p>Chemosensitivity of N-methyl-N-nitrosourea-induced rat mammary tumours treated with 5-fluorouracil at a dose of 100 mg kg(-1) i.p. was assessed by using diffusion-weighted 1H-MRS to measure the average diffusion coefficient (ADC) of water in the tumour tissue. ADC measurements prior to any therapy correlated positively with necrotic fraction. Tumours with low initial ADC ($< 0.95 \times 10^9 \text{ m}^2 \text{ s}^{-1}$) showed an increase in ADC 7 days after treatment, whereas tumours with a high initial ADC ($> 1.2 \times 10^9 \text{ m}^2 \text{ s}^{-1}$) showed a decrease. All tumours decreased significantly in volume ($P < 0.05$) 2, 5 and 7 days after treatment. At day 7 post-treatment, tumours with a high pre-treatment ADC started to regrow. The initial ADC value, as well as changes after treatment predict tumour chemosensitivity, which could be clinically relevant.</p>
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[1] <http://okina.univ-angers.fr/l.lemaire/publications>

- [2] [http://okina.univ-angers.fr/publications?f\[author\]=7112](http://okina.univ-angers.fr/publications?f[author]=7112)
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- [4] [http://okina.univ-angers.fr/publications?f\[author\]=7114](http://okina.univ-angers.fr/publications?f[author]=7114)
- [5] [http://okina.univ-angers.fr/publications?f\[keyword\]=1383](http://okina.univ-angers.fr/publications?f[keyword]=1383)
- [6] [http://okina.univ-angers.fr/publications?f\[keyword\]=8410](http://okina.univ-angers.fr/publications?f[keyword]=8410)
- [7] [http://okina.univ-angers.fr/publications?f\[keyword\]=8409](http://okina.univ-angers.fr/publications?f[keyword]=8409)
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=8411](http://okina.univ-angers.fr/publications?f[keyword]=8411)
- [9] <http://okina.univ-angers.fr/publications/ua4139>
- [10] <http://www.ncbi.nlm.nih.gov/pubmed/10383089?dopt=Abstract>

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