



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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SUBJECT: Cyanazine (188C), Atrazine (63) and Simazine (783) <sup>OFFICE OF PESTICIDES AND TOXIC SUBSTANCES</sup>  
Quantitative Risk Assessment Comparisons on Malignant  
Mammary Gland Tumors only in Rats.

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Estimated<sup>+</sup>  $Q_1^*$  (mg/kg/day)<sup>-1</sup> for Cyanazine, Atrazine and  
Simazine in Sprague-Dawley Female Rats

	<u>Tumors in the</u> <u>Mammary Gland</u>	<u>Rat</u> $Q_1^*$ (mg/kg/day) <sup>-1</sup>	<u>In Human Equiv.<sup>++</sup></u>
Cyanazine	Carcinoma, Adenocarcinoma & Fibrosarcoma	$1.66 \times 10^{-1}$ (a)	$8.8 \times 10^{-1}$
Atrazine <sup>1</sup>	Carcinoma	$1.72 \times 10^{-2}$ (b)	$9.2 \times 10^{-2}$
Simazine	Carcinoma	$2.25 \times 10^{-2}$ (b)	$1.2 \times 10^{-1}$

<sup>+</sup> Based on results from Stattox computer program

<sup>++</sup> Derived by the use of surface area correction -  
(Human Wt./ Rat Wt.)<sup>1/3</sup>

(a) Multi-Stage Model (Global86)

(b) Time-to-tumor Multi-Stage Model (Weibull83)

<sup>1</sup> HED's previous estimate of  $Q_1^*$  was  $2.2 \times 10^{-1}$  based upon both  
benign & malignant mammary gland tumors. For the purposes  
of comparison with Cyanazine & Simazine, only malignant  
tumors were used in the estimation of the unit risk,  $Q_1^*$ .