Can write $K = UV^T$ some U, V.

~~$\det(A + K) =$~~

Then $\det(A+K) = \det(I + V^T A^{-1} U) \det(A)$

$\frac{1}{(r-t)^2} \det(A)$ is bounded below.

(so A is invertible)

and

$\frac{A}{(r-t)^{2/3}} \to B$ ~~some non~~ invertible matrix B.

where $B = \operatorname{cov}(f'(t), f''(t), f'''(t))$

So $\det(A+K) = (r-t)^2 \det$

$\det(-A-K) \geq \det(-A) + \det(-K)$

and

$\begin{pmatrix} x & \\ & \frac{1}{x} \end{pmatrix}$

$\begin{pmatrix} 1 & & \\ & 1 & \\ & & \frac{1}{(r-t)} \end{pmatrix} A \to B$

$\begin{pmatrix} a & b & c \\ d & e & (s-t)f \\ h & (s-t)g & (s-t)^2 h \end{pmatrix}$

$\det(A+K) = \det(A)\det(I + A^{-1}K)$

$\geq \det(A) + \det(K)$ LoL!