Tyrosinase and the stages of melanoma

I. Melanoma in situ
The tumor is still superficial.

II. Invasive melanoma
The tumor reaches the dermis.

III. Local/regional melanoma
The tumor reaches the bloodstream.

IV. Metastatic melanoma
The tumor spreads to the organs (liver, lungs and bones).

Imaging method
The scanner is passed over the surface of the skin and detects whether any tyrosinase is present. This method provides a non-invasive stage-2 diagnosis of the tumor, when there is a high level of tyrosinase.