

Immunotherapy represents an entirely new strategy for cancer treatments

Most cancers, once they spread, are incurable. Cancer researchers are desperate to raise the number of patients who go into remission, to prolong those remissions, and to ultimately prevent relapse. So when a new way of attacking cancer comes along, it is often greeted with incautious euphoria and an assumption that the new paradigm can be quickly converted into a cure for all cancers.

The breakthrough [with cancer drug AG-221] is notable in part for the unconventional manner in which the drug attacks its target. There are many kinds of cancer, but treatments have typically combatted them in one way only: by attempting to destroy the cancerous cells. Surgery aims to remove the entire growth from the body; chemotherapy drugs are toxic to the cancer cells; radiation generates toxic molecules that break up the cancer cells' DNA and proteins, causing their demise. A more recent approach, immunotherapy, coöpts the body's immune system into attacking and eradicating the tumor.

The Agios drug, instead of killing the leukemic cells—immature blood cells gone haywire—coaxes them into maturing into functioning blood cells. Cancerous cells traditionally have been viewed as a lost cause, fit only for destruction. The emerging research on A.M.L. suggests that at least some cancer cells might be redeemable: they still carry their original programming and can be pressed back onto a pathway to health.

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