

Need for definition:

Abscopal Effect

HZE



Effects in non-targeted
tissues/organs

Azzam Slide #18 Section D

Abscopal Effect

- Abscopal effects are radiation induced effects in unirradiated tissues outside of an irradiated volume
- Abscopal effects were originally described by R.H. Mole in 1953, the word come from the latin ab (position away from) and scopus (mark or target)
- Beyond unwarranted side effects of radiotherapy, these abscopal effects may also be therapeutic when distant metastases, which have not been irradiated, exhibit a delayed therapeutic response
- The abscopal phenomenon is still not fully explained, although it has been hypothesized that both the radiation and the immune stimulation play a role.
- Mitotic inhibitors (cytokines) are induced by local radiation then released into the circulation to mediate the systemic anti-tumor effect.
- Next, irradiation of a tumor also induces the release of circulating tumor antigen or inflammatory factors, which may then mediate an augmented immune response against non-irradiated, malignant lesions expressing similar tumor antigens (Dr. Allen)