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How does PET/CT help in the selection of therapy for patients with Hodgkin lymphoma?

I am commonly asked the following question in clinical practice. How does PET-CT help in selecting therapy for patients with Hodgkin lymphoma? Well, in both early and advanced-stage disease of Hodgkin lymphoma, PET-CT has important prognostic ability, so an early interim PET which is negative after 1 or 2 cycles of chemotherapy is a very good prognostic sign, which means it is a good idea to continue the therapy that you are giving or even in low-risk patients perhaps to reduce the burden of therapy that you plan to give, whereas a PET scan early during therapy which is positive may show you or indicate that the treatment you are giving is not sufficiently efficient and that you may in selected patients want to escalate that therapy to more intensive chemotherapy or perhaps a combination of chemotherapy and radiotherapy. Now, whereas the prognostic properties of PET are well demonstrated in several trials, the value for groups of patients or for individual patients of changing therapy on the basis of early interim PET is still to be demonstrated. There are trials published in early stage Hodgkin lymphoma showing what happens if you use an early interim PET which is negative to omit radiotherapy in selected patients. Two trials have been published, randomized trials, investigating whether you can use an early negative PET to select patients who do not need radiotherapy after the completion of radiotherapy, but followup is quite short and we cannot make any definite conclusions as yet. In advanced-stage disease, there are several trials ongoing. Most of these trials use early PET to either continue therapy, which is typically the combination of chemotherapy called ABVD, or in cases of the positive early PET to escalate to more intensive regimens.