In 2016, the main objective of the STWP research activity was to explore the role of AHCT in rare clinical variants of GCT. 

- Pure seminoma. The optimal management of advanced seminoma that require after chemotherapy remains unknown. We retrospectively analyzed outcomes with the use of HSCT. On multivariate Cox analysis, refractory disease was a significantly negative prognostic factor for both PFS and OS, while prior radiotherapy tended to significantly influence for both: HSCT may represent a valuable therapeutic option after standard-dose chemotherapy failure.

- Mediastinal non-seminoma (MnS GCT). The preliminary data of this retrospective analysis confirmed that the MnS was characterized by the poorest outcome with 5-year overall survival ranging from 40% to 45%. The use of AHCT as both early intensification and at disease recurrence proved to be effective, given upfront, and may produce a 15%-20% absolute improvement in survival compared with standard dose CT.

- Refractory gestational trophoblastic neoplasia (GTN). A few case reports reported of salvage AHCT in patients with GTN. We conducted a retrospective analysis on 29 patients GTN treated with salvage HDC. Our study showed that HDC based on carboplatin seems to be active in this heavily pretreated patient population with refractory GTN, and that AHSCT might represent a possible option.

Long-term results of salvage high-dose chemotherapy for germ cell tumours in:
- Female
- Adolescent
- Patients aged over 40 yrs at time of HSCT
- Incidence of secondary malignancies (SM) in patients with germ cell tumours (GCT) who received high-dose chemotherapy

The use of plerixafor for stem cell mobilization in solid tumors. The retrospective analysis performed in patients treated with HSCT showed that plerixafor achieved successful mobilization in >80% of ST patients, independently of the disease category. A prospective study is planned in order to confirm the results obtained from this retrospective series.

In 2016, the STWP started a retrospective study with the main goal to assess long-term efficacy and toxicity of autologous HSCT in metastatic BC. AHCT has a low mortality rate and provides satisfactory long-term survival rates but needs to be further investigated in clinical trials. A Prospective clinical trial in triple-negative breast cancer is ongoing.

Incidence and prevalence of therapy-related myeloid neoplasms and myelodysplastic/myelo proliferative diseases (MN) in breast cancer patients as a consequence of exposure to alkylating agents, topoisomerase II inhibitors and/or ionizing radiations, including high-dose chemotherapy regimens followed by autologous stem cell transplantation.

HSCT in soft tissue sarcoma - a long-term follow-up: a retrospective study by the EBMT Solid Tumour Working Party on different histologic subtypes.

Type of tumour / auto HSCT / 2010-2015

Germinal Cell Tumor (GCT)

The main aims of STWP research activity in 2015 was to address the prognostic significance of response to induction chemotherapy high dose CT (HDC) courses, and prior taxane (TXL)-CT for advanced GCT, as this knowledge can inform trial design, stratification and eligibility criteria to HDC. While PD to induction CT was independently prognostic for both PFS and OS, TXL regimens before HDC did not affect the outcome. Stratification on trials for the latter factor did not appear to be required when accounting for the other clinical predictors. We demonstrated that the majority of patients with PD to induction chemotherapy usually progress after HDC. In conclusion, in this population-based analysis we observed that results of HDC as salvage therapy administered in the last 10 years were not influenced by the increasing use of taxane-containing salvage chemotherapy preceding HDC. Moreover, while we have confirmed HDC as a substantially effective strategy irrespective of the number of prior regimens, an additional prognostic factor for clinical use was provided that was represented by the response to induction chemotherapy administered as part of the transplantation strategy.

Breast Cancer

In 2015, STWP conducted a retrospective study with the main goal to assess toxicity and efficacy of adjuvant high-dose chemotherapy (HDC) and autologous hematopoietic stem cell transplantation (AHCT) in 583 high-risk breast cancer (BC) patients (3 positive nodes) who were transplanted between 1995 and 2005 in Europe. Subgroup analysis demonstrated that OS was significantly better in patients with endocrine-responsive tumors, less than 10 positive lymph nodes and smaller tumour size. HER2 status did not affect survival probability. Adjuvant HDC with AHCT has a low mortality rate and provides impressive long-term survival rates in patients with high-risk BC. Our results suggest that this treatment modality should be considered in selected high-risk BC patients and further investigated in clinical trials. Along with some more recent phase III studies, retrospective analysis and, to some extent, the results from meta-analysis, our results suggest a potential role for HDC and AHCT in high-risk BC.

Germ cell tumours - auto HSCT / 2000-2015


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