REFRACTORY CLASSICAL HODGKIN LYMPHOMA WITH SEQUENTIAL FAILURE OF MODERN THERAPIES AND PLANNED ALLOGENEIC TRANSPLANTATION

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INTRODUCTION

Classical Hodgkin lymphoma with primary refractory disease after auto-HSCT represents a challenging clinical scenario, particularly in young patients. Such cases often require multiple lines of therapy and treatment modifications.The incidence of allo-HSCT in Hodgkin lymphoma is 15–25%, but feasibility remains limited by infectious complications and organ toxicity.

Key question: Can dacarbazine-containing chemotherapy be revisited after exhaustion of targeted and immunotherapeutic options?

CLINICAL CASE

Age: 20 years
Diagnosis: Stage IVB classical HL, nodular sclerosis subtype
B symptoms: Fever, night sweats, 20 kg weight loss
Sites: Cervical, axillary, mediastinal lymph nodes; lung lesions; esophageal wall invasion
PET/CT: Extensive metabolically active disease (Deauville 5)
IPI: 2 points
Last follow-up: June 2026

TREATMENT OVERVIEW

Lines attempted: 8 distinct regimens
Auto-HSCT: 1 (BeEAM conditioning)
Immunotherapy: Nivolumab, pembrolizumab, brentuximab vedotin
Targeted: Lenalidomide
Current status: AVD-Pembrolizumab continued; allo-HSCT postponed due to pneumonia
Notable: Complete metabolic response achieved twice — after BeGeN+Len and after AVD-Pembro+Len.
Treatment timeline & responses
Aug 2023 – Feb 2024 BEACOPP-14 × 8 cyclesCutaneous lesion developed after cycle 5; sternal fistula formed. *PET/CT 27.02.2024* **Progression** (Deauville 5)
Mar – Apr 2024 DHAP + Brentuximab vedotin × 2 Stem cells collected (12.3×10⁶ CD34+/kg). Further progression with new skin lesions. *PET/CT 08.05.2024* **Progression**
May – Jun 2024 Nivolumab + Bendamustine × 2Mixed dynamics; overall progression on CT *03.07.2024* **Progression**
Jul – Aug 2024 Nivolumab + Bendamustine + Brentuximab × 3 Significant reduction in nodal and splenic disease. *PET/CT 14.08.2024* **Partial response**
Sep – Oct 2024 Pembrolizumab + Bendamustine + Brentuximab × 2 Subsequent progression on *PET/CT 22.10.2024* **Progression**
Oct – Dec 2024 BeGe + Pembrolizumab + Lenalidomide → BeGeN + LenalidomideComplete metabolic response achieved. *PET/CT 20.01.2025* **Complete response**
Feb 2025 BeEAM + Auto-HSCT Reinfusion of autologous stem cells; **Consolidation**
Jun – Jul 2025 Brentuximab vedotin maintenance × 2 Relapse: cervical, axillary, abdominal nodes; bone lesions. *PET/CT 23.07.2025* **Progression**
Aug – Sep 2025 ICE + Pembrolizumab × 2 No response; persistent high metabolic activity. *PET/CT 21.10.2025* **No response**
Nov 2025 – Jun 2026 AVD + Pembrolizumab (+ Lenalidomide initially) × 6 Complete response after 2 cycles; continued to 6 cycles due to pneumonia delaying allo-HSCT. *PET/CT 13.01.2026* **Complete response**

Current challenge: Allo-HSCT indication: Fully matched unrelated donor identified; stem cells collected (6.2×10⁶ CD34+/kg).**Barrier:** Persistent bilateral polysegmental pneumonia since February 2026.

Autoimmune pneumonitis excluded. Radiology consistent with viral bronchiolitis. Multiple antibiotic courses: piperacillin-tazobactam, meropenem, amikacin, tigecycline, levofloxacin. Normal IgG levels. **Decision:** Allo-HSCT postponed; AVD-Pembrolizumab continued to preserve anti-tumor response.

CONCLUSION

This case illustrates an extremely refractory course of Hodgkin lymphoma characterized by sequential failure or temporary responses to multiple modern treatment strategies, including immune checkpoint inhibitors, brentuximab vedotin, and lenalidomide.

Revisiting **dacarbazine-containing chemotherapy (AVD)** combined with pembrolizumab after exhaustion of targeted and immunotherapeutic options achieved a durable complete metabolic response, suggesting a potential role for this approach in heavily pretreated cHL.

Feasibility of allo-HSCT remains an open question, particularly in the setting of prolonged pulmonary comorbidity, where the risk of life-threatening systemic infection may outweigh transplant benefit.

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