Supportive treatments to control myelosuppression and related costs with lurbinectedin, CAV and topotecan with or without trilaciclib in relapsed SCLC: a review on the basis of clinical trials

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BACKGROUND

- Chemotherapy-induced myelosuppression (CIM) including neutropenia, anemia or thrombocytopenia can represent a severe burden on patients with Small Cell Lung Cancer (SCLC). Furthermore, dose and frequency of treatments may be reduced in response to CIM.
- Differences exist with respect to CIM among the therapies for 2LSCLC topotecan, lurbinectedin and CAV.
- Supportive interventions to manage chemotherapy induced anemia, neutropenia or thrombocytopenia are costly and carry many disadvantages including their own side effects. Trilaciclib is approved by the FDA as myeloprotective therapy to decrease the incidence of CIM.
- **This review describes the burden and costs of myelosuppression with lurbinectedin monotherapy, CAV and topotecan i.v - with or without prior trilaciclib - in patients with relapsed SCLC**

METHODS

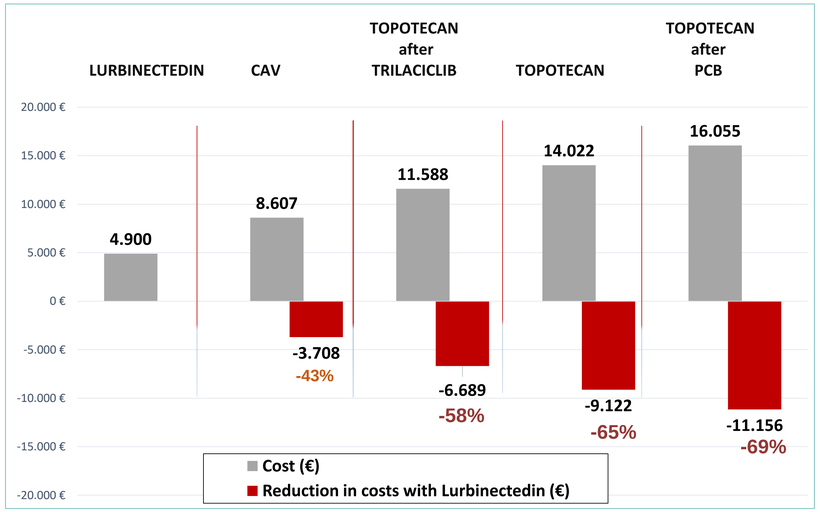
- Inputs were derived from recent clinical trials of 2L SCLC chemotherapies that reported key measures of CIM events and supportive care.
- Therapies were used mainly in the second line setting.
- Cost analysis was done for grade ≥3 neutropenia, anemia and thrombocytopenia.
- Costs of supportive measures given to control CIM are investigated from the point of view of the Spanish health care system. Unit costs were obtained from the Spanish Minimum Basic Data Set (€, 2023).

Myelosuppression events (patients %) and supportive treatments with lurbinectedin monotherapy, topotecan i.v. (with or without previous trilaciclib) and CAV

	Lurbinectedin Basket trial * N=105	Topotecan Study NCT 02514447*		CAV ATLANTIS** N=168	Topotecan ATLANTIS** N=121
		Prior TRILACICLIB N=32	Prior PCB N=29		
Neutropenia Gr ≥3	46.7	68.8	85.7	66.1	73.6
Severe neutropenia	24.8	40.6	75.9	54.2	50.4
Febrile neutropenia	4.8	6.3	17.9	10.1	5.8
Anemia Gr ≥3	10.5	28.1	60.7	26.2	54.5
Thrombocytopenia Gr ≥3	6.7	51	57.2	17.9	49.6
G-CSF Therapeutic	21.9	50.0	65.5	30.4	19.0
Platelet transfusions	4.8	25	31	3.6	21.5
RBC transfusions	10.5	31.3	41.4	18.5	46.3
EPO	1.9	3.1	20.7	9.5	8.3

* Primary prophylaxis with G-CSF not allowed; ** Primary prophylaxis with G-CSF allowed; Severe neutropenia defined as absolute neutrophil count <0.5 x 10^9 cells/l ; PCB: placebo

Financial burden (€, Spain) due to CIM* with therapies for 2L SCLC and cost savings with lurbinectedin



Anemia, thrombocytopenia and neutropenia
CAV (ATLANTIS trial), Topotecan after trilaciclib or after placebo (NCT 02514447), topotecan (ATLANTIS trial)
Basket trial and Study NCT 02514447 did not allow primary prophylaxis with G-CSF
ATLANTIS trial included primary prophylaxis with G-CSF allowed

CONCLUSIONS

- Incidence of CIM varies with the therapy used to treat 2L SCLC. Inter-trial comparisons show lower incidence of CIM with lurbinectedin monotherapy compared to other SOCs, with important numeric differences.
- Fewer use of supportive therapies in response to CIM events is seen with lurbinectidin monotherapy compared to CAV or topotecan.
- CIM events are notably less common with lurbinectedin than with topotecan after trilaciclib, a therapy approved to prevent CIM.
- **Cost savings with lurbinectedin:**
  - ✓ vs CAV **43%**
  - ✓ vs trilaciclib/topotecan **58%**
  - ✓ vs topotecan **65%**
- **Lurbinectedin monotherapy was associated with less myelosuppression and reduced use of supportive therapies while limiting costs.**

Poster sponsor: Pharma.Mar.
Dr M. Dómine declares no conflicts of interest.

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