

Mirvetuximab Soravtansine for FR α -positive Platinum-Resistant Ovarian Cancer

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Abstract

Ovarian cancer is not much better now, and many patients have developed resistance to platinum-based chemotherapy. Folate receptor alpha (FR α) is highly expressed in many ovarian cancers and has relatively low expression in normal tissues; therefore, it serves as a potential target for therapy. Mirvetuximab Soravtansine (MIRV) is an FR α -targeting antibody-drug conjugate (ADC) that delivers the cytotoxic agent DM4 to FR α -expressing tumour cells. MIRV binds to FR α , is taken up by the cell, releases DM4, impairs microtubule function, and thus causes tumour cell death. MIRV is used to determine whether FR α is expressed in a patient, and its application in platinum-resistant ovarian cancer has provided some clinical evidence. The FORWARD I trial indicated that FR α expression may be associated with differences in response to treatment, and subsequent SORAYA and MIRASOL trials have shown stronger clinical benefits for patients with high levels of FR α expression. MIRASOL had a relatively high response rate and progression-free survival and overall survival than MIRV in standard chemotherapy. MIRV also has some deficiencies, such as ocular side effects, differences in FR α expression in tumours, and the risk of treatment resistance. More research needs to be done to improve the selection standards for patients and investigate combined-treatment paths with MIRV. MIRV offers a more specific treatment option for some patients with FR α -positive platinum-resistant ovarian cancer overall.

Key words

Writing standards; Publication guidelines; Academic integrity; Manuscript structure

1. Introduction

Ovarian cancer (OC) is a serious kind of female genital cancer that often presents in an advanced stage. About 300,000 new cases are diagnosed around the

world each year, and many patients do not know they have been ill until it is too late. The 5-year survival rates of people with different stages of the disease after diagnosis are around 26%-42%, and over 40% of patients with stage III or IV disease die within a year of diagno-

sis [1]. More than 90% of the malignant ovarian tumours are epithelioid ovarian carcinomas (EOCs) [1]. Among the above cases, high-grade serous ovarian cancer (HG-SOC) was the most frequent, accounting for about 70%-75% of all ovarian cancers [2].

How to treat platinum-resistant ovarian cancer is also a problem at present. Non-platinum chemotherapy includes paclitaxel, pegylated liposomal doxorubicin and topotecan, which are frequently employed in this situation, and for some patients, bevacizumab may also be added. These treatments can still help, but the response is often weak and toxicity is still a problem [3,4]. Due to the above deficiencies, research has been expanding in recent years to focus on treatments that directly address the biological characteristics of tumours.

Folate receptor alpha (FR α) is one such target that has been studied. FR α is widely expressed in many epithelial ovarian cancers, especially high-grade serous ovarian cancer, and is relatively scarce in most normal tissues [5]. Thus, it is feasible to deliver the therapy selectively to the cancer cells. Ventana FOLR1 RxDx assay can be used to identify patients with tumours that express high FR α [5]. The above test will help identify whether patients with high levels of FR α will be more responsive to FR α -targeting therapy in clinical trials [4].

Mirvetuximab Soravtansine (MIRV) is an antibody-drug conjugate designed for patients with FR α -positive platinum-resistant ovarian cancer. The drug is an FR α -binding antibody, a cleavable linker and a cytotoxic payload DM4. MIRV binds to FR α on the surface of tumour cells, is taken up by the cells, and then released in the cytoplasm. DM4 inhibits the function of microtubules and therefore prevents cell division, causing death in tumour cells [2]. FR α is selected as the target, and then MIRV is designed to deliver cytotoxic treatment more precisely to cancer cells expressing this receptor.

Clinical development of MIRV has also pointed out the need for patient selection. FORWARD did not reach the main end goal, but the study also found that FR α expression was closely linked to treatment response [4]. SORAYA showed good results in patients with FR α -high tumours later on, and MIRASOL provided phase III data to show that MIRV was superior to standard chemotherapy [3,6]. MIRV also has some defects at the same time. Blurred vision and keratopathy are ocular adverse

events that need to be monitored in patients undergoing treatment [7]. This paper reviews the mechanism of MIRV, the function of FR α as a biomarker, relevant clinical trials, safety issues, present deficiencies, and future prospects for MIRV in FR α -positive platinum-resistant ovarian cancer.

2. Mechanism of Mirvetuximab Soravtansine

2.1 MIRV as an ADC

MIRV is an FR α -targeted antibody-drug conjugate for patients with FR α -positive platinum-resistant ovarian cancer, fallopian tube cancer and primary peritoneal cancer. Adjuvant chemotherapy damages both cancer cells and healthy rapidly dividing cells; thus, Antibody-drug conjugates (ADCs) aim to deliver cytotoxic drugs selectively to cells expressing a certain target. MIRV is a target of FR α and is often expressed in epithelial ovarian cancer [2].

The three parts of the drug are an FR α -binding antibody, a cleavable linker and the cytotoxic payload DM4. Antibodies bind to FR α on the surface of cancer cells and thus have the targeting function of ADCs. The linker joins the antibody to DM4 and maintains the stability of the drug in the tumour cells. Internalisation releases DM4, and it is by inhibiting microtubules that the main cytotoxic effect occurs [2].

This Design can help treat platinum-resistant ovarian cancer by offering an alternative to late-stage treatment. Non-platinum chemotherapy may still be used, but the response rate is relatively low and may not be sustained for an extended period. MIRV links the administration of treatment with the presence of a tumour-associated biomarker in another way. FR α is highly expressed in many epithelial ovarian cancers and has a relatively low level in normal tissues; therefore, this targeting method has shown some efficacy [5]. Research has also found that people with higher levels of FR α are more likely to be infected by MIRV in actual practice [4, 6]. Therefore, the effect of MIRV may not be solely due to the activity of DM4; it also needs to be bound by sufficient FR α for the drug to enter the tumour cells.

2.2 FR α -mediated binding and internalization of MIRV

The first step of MIRV activity is binding to FR α on the surface of tumour cells. FR α is frequently expressed in many epithelial ovarian cancers, particularly high-grade serous ovarian cancer, and is relatively scarce in most normal tissues [5]. Therefore, FR α can serve as a delivery vehicle to transport DM4 into cancer cells through this mode.

MIRV binds to FR α and, then, a drug-receptor complex forms in the tumour cell. DM4 needs to be released in the cell for the internalisation step to occur and thus inhibit cell division. The ADC enters an intracellular compartment, is then processed, and DM4 is released [2]. Thus, FR α will have the two above functions. It can help find patients who are likely to respond well to MIRV and, by itself, activates the mechanism that allows ADCs to enter tumour cells.

The Quantity of FR α on the tumour may affect the effect of MIRV. Tumors with a high FR α expression provide more binding sites and may thus enhance ADC binding and internalisation. Tumors with low or patchy FR α expression will receive less drug. Clinical Data Support this Conclusion. SORAYA had a good response in patients with FR α -high platinum-resistant ovarian cancer, and MIRASOL showed better outcomes than standard chemotherapy in FR α -positive disease [3,6]. Therefore, based on the above results, FR α testing is required to select the MIRV treatment.

2.3 DM4 payload release and tumor cell killing

MIRV is taken up by the cell, and then DM4 is released. DM4 is a maytansinoid compound that interferes with microtubule dynamics. Microtubules are needed for normal cell division in mitosis. When microfilaments are damaged, the cell cannot divide normally; as a result, it may be arrested in the cell cycle and subsequently die [2].

DM4 offers the direct cytotoxic effect of MIRV. The antibody part targets the FR α -expressing cells for delivery, and then the payload damages the tumour cells after being taken up. MIRV may still be effective for tumours that have not shown a good response to platinum-based drugs for this reason. Platinum resistance

does not necessarily mean that the tumour has been damaged by a microtubule-disrupting payload.

MIRV may also be a bystander effect. After DM4-related metabolites are released in a target cell, some active metabolites can diffuse to nearby tumour cells [2]. This may be convenient as ovarian tumours are often heterogeneous, and not all tumour cells express FR α to the same extent. The bystander effect may cause MIRV to damage some neighbouring cells with a lower expression of FR α , in addition to the cells with high expression. DM4 is still a cytotoxic drug, and therefore targeted delivery has not reduced the risk of toxicity.

In short, the steps in the process of MIRV action are FR α recognition, receptor binding, internalization, DM4 release, microtubule disruption and tumor cell death. The above steps also show why FR α expression is related to the treatment effect. If the target is expressed at a low level, the ADC will have fewer binding sites for the tumour cells.

3. FR α as a Biomarker in Ovarian Cancer

3.1 FR α expression in ovarian cancer

FR α can be used to diagnose ovarian cancer and serves as a target for treatment of ovarian cancer. The FOLR1 gene codes for the receptor, and this receptor is on the cell membrane. Although it participates in the normal biological function of folate transport, its main role in treating ovarian cancer is due to altered expression in tumour tissue and most normal tissues [5].

High FR α expression offers a target for specific treatment. MIRV can use this receptor to recognise and bind to ovarian cancer cells expressing FR α . As expression in most normal tissues is relatively low, this targeting strategy may be more selective than non-targeted chemotherapy [5]. MIRV does have side effects, but they also provide a reason for FR α to be an appealing target for an ADC.

FR α expression is relatively high in high-grade serous ovarian cancer, but this is not the case for all patients. Some tumours have strong and extensive staining for FR α ; others have weak or irregular expression. The two are different, and MIRV requires FR α for binding

and endocytosis [2, 5]. Therefore, FR α is now known to be linked with ovarian cancer, and at the same time, researchers have begun to explore its application in the diagnosis and treatment of other cancers.

3.2 FR α testing and patient selection

MIRV requires FR α for targeting, so we first determined how much FR α the patient's cells expressed. Ventana FOLR1 RxDx assay is employed to examine the expression of FR α in tumour tissue and to identify patients with FR α -high tumours [5]. It is an immunohistochemical assay that detects membrane staining in living tumour cells. FR α -high status in clinical studies is defined by the proportion of tumour cells with moderate or strong membrane staining [5].

The quantity of this test directly relates to the operation of MIRV. A tumour with high FR α expression can facilitate more ADC binding and enhanced internalisation of DM4, thereby increasing the delivery of DM4 to tumour cells. A tumour with low FR α expression has fewer available targets and is therefore less responsive. Therefore, FR α testing is used to characterise the tumour and to direct the selection of therapy [2-5].

The Need for Patient Selection in MIRV Development became evident. FORWARD did not meet its main objective, but the results indicated that the definition and degree of FR α positivity affect treatment response [4]. Later research used an improved FR α selection. SORAYA selected patients with FR α -high platinum-resistant ovarian cancer for study and achieved good clinical results [3]. The contrast of the above studies indicates that precise biomarker tests are necessary for applying FR α -targeted therapy accurately.

3.3 Relationship between FR α -high expression and treatment response

FR α -high tumours are likely to respond better to MIRV because the drug needs to bind with FR α inside the tumour cells. A relatively high expression level corresponds to more receptor units on the cell surface. It can increase the amount of ADC bound, internalised and released as DM4 in the cell [2, 5]. Tumors with low expression may not be exposed to the same level of drugs.

Clinical Trial results support the above. FORWARD did not reach its first aim, but patients in the

FR α -high group seemed to gain more from MIRV. In that subgroup, the objective response rate of MIRV was 24%, and it was 10% with chemotherapy [4]. Then Soraya reported that the actual response rate of patients with FR α -high platinum-resistant ovarian cancer was 32.4% [3]. MIRASOL performed better than the other in the Phase III study. The Goal Response Rate for MIRV was 42.3%, and it was 15.9% with chemotherapy. Median progression-free survival was 5.62 months with MIRV and 3.98 months with chemotherapy, and the median overall survival was 16.46 months and 12.75 months, respectively [6]. Together, these results show why FR α expression can be used to select patients for MIRV treatment.

FR α tests are still imperfect. Expression is heterogeneous within the same tumour, so one biopsy sample may not be representative of all tumour sites. FR α expression will change after the previous treatment. Immunohistochemistry results are also influenced by the condition of the tissue and by the interpretation of the stain [5]. These problems will be less obvious in some of the patients.

FR α thus links the biology of ovarian cancer with the clinical application of MIRV. Alterations in drug binding, absorption and distribution, etc. Given the reduced options for treatment in platinum-resistant diseases, FR α expression can be used to identify patients and thus tailor-made therapy can be chosen.

4. Clinical Evidence of MIRV

4.1 Findings from the FORWARD I trial

The first Phase III trial of the investigator's selected chemotherapy in patients with platinum-resistant ovarian cancer versus MIRV was FORWARD. The chemotherapy options were paclitaxel, pegylated liposomal doxorubicin and topotecan. The study did not meet its main end point of progression-free survival for the entire cohort [4]. Although the trial did not meet the primary end point, some data on the effect of FR α expression after treatment were obtained.

The FR α -high group showed more favourable results. The goal response rate for the MIRV group was 24%, and it was 10% in the chemotherapy group [4]. The above results were not suitable for carrying out a

positive Phase III trial of FORWARD I; however, it was proposed that patients with high FR α expression may benefit more from MIRV. It provided the foundation for the design of the following research and enabled more specific selections of biomarkers.

4.2 Results from the SORAYA trial

SORAYA is a Phase II trial for patients with FR α -high platinum-resistant ovarian cancer. Unlike FORWARD I, the study used a particular FR α -based patient selection. The patients had already received previous treatments and had few other choices; thus, they were a representative group for the evaluation of MIRV [3].

The total response rate for SORAYA was 32.4%, and these included full and partial responses [3]. The mean of the middle response time was 6.9 months in the study, as reported in [3]. Given the limited treatment options for platinum-resistant ovarian cancer, some patients achieved a good response to MIRV and thus kept the disease in check for a long time. Therefore, Soraya has added to the idea that FR α -high status can help identify more likely-to-benefit patients.

SORAYA also provided some safety facilities. A representative adverse reaction to the treatment is blurred vision or keratopathy [3]. Most of the eye diseases can be treated by observation, supportive care and reduced doses. These results supported the continued development of MIRV in FR α -high platinum-resistant ovarian cancer.

4.3 Results from the MIRASOL trial

MIRASOL had better Phase III data for MIRV. MIRV was compared with the investigator's-choice chemotherapy in patients with FR α -positive platinum-resistant ovarian cancer in a trial. MIRV extended some favourable prognostic indicators, such as the rate of objective response, progression-free survival and overall survival [6].

The actual response rate of MIRV was 42.3%, and it was 15.9% for chemotherapy [6]. The median progression-free survival in the MIRV group was 5.62 months and in the chemotherapy group was 3.98 months. The median overall survival was 16.46 months for MIRV and 12.75 months for chemotherapy [6]. Based on the above results, MIRV can be used in combination with

or alone for certain patients to receive conventional chemotherapy.

MIRASOL was also a good one; it verified that MIRV worked well in a randomised phase III trial. In combination with FORWARD I and SORAYA, the trial has also investigated how the enhancement of FR α -based patient selection affected the progress of MIRV. The better results in the later studies were obtained from populations that had been selected according to FR α expression.

4.4 Evidence for MIRV combined with bevacizumab

MIRV has also been used with bevacizumab in research. Bevacizumab is an anti-angiogenic drug for ovarian cancer that has been used previously, and MIRV is another type of treatment that works in a different way.

MIRV combined with bevacizumab had an objective response rate of 39 per cent and a median progression-free survival of 6.9 months in the phase I trial for platinum-resistant ovarian cancer [8]. A good-performing subset had a response rate of 56% and a median progression-free survival of 9.9 months [8]. Later, Gilbert and others presented data showing an objective response rate of 44 per cent and a median progression-free survival of 8.2 months for the combination [9].

Therefore, it is thought that bevacizumab may expand the treatment scope for some patients. At the same time, combination therapy may also increase the risk of harm due to the combination of the two drugs. More studies need to be carried out to determine which patients will respond better to this way.

5. Safety and Limitations

5.1 Common adverse events of MIRV

MIRV is a targeted ADC that can still cause harm because it carries the cytotoxic payload DM4. Some common adverse reactions in the clinical trial were blurred vision, keratopathy, nausea, diarrhoea, fatigue and other treatment-related problems [3,6]. Based on the above results, a particular treatment can increase selectivity without fully eliminating toxicity.

MIRV is not safe for patients at the same rate as conventional chemotherapy. Some toxicities of the old chemotherapy are less serious, and ocular adverse reactions are more typical for MIRV. Therefore, the patients will be observed during treatment, and if a severe side effect occurs, their dose may need to be reduced or withheld.

5.2 Ocular adverse events, including blurred vision and keratopathy

The first serious problem with the eye drops is a reduced visual acuity. Blurred vision and keratopathy are relatively common diseases of the eye that both result from damage to the corneal epithelium [7]. These may affect the person's sight and quality of life during recovery. Both blurred vision and keratopathy were frequently reported treatment-related adverse events at SORAYA [3].

A pooled safety analysis showed that about 50% of the patients treated with MIRV experienced blurred vision or keratopathy, but most of these events were grade 1 or grade 2 [7]. Grade 3 ocular events were relatively rare, and most ocular events improved or resolved with proper care [7]. Thus, although Ocular Toxicity is relatively frequent, it can generally be handled in time after early detection.

5.3 Monitoring and management of ocular adverse events

Ocular adverse events are known risks; thus, the eyes will be observed at all times during MIRV treatment. A baseline eye examination may be required before therapy begins, and then, during treatment, changes in the cornea or vision should be monitored promptly [7]. Supporting Measures may include lubricated eye drops, corticosteroid eye drops and, if necessary, a reduced dose [7].

The clinic will organise joint care for cancer and eye diseases. If there is serious blurred vision or other symptoms, then treatment may need to be delayed until these symptoms improve, and in some cases, a reduced dose will be given. The above measures will help the patient continue to take the medicine and reduce the risk of severe eye diseases.

5.4 Remaining limitations, including patient selection and possible resistance

MIRV still has certain defects. Firstly, the type of treatment varies with the expression of FR α . Patients with low FR α expression may not gain much benefit due to fewer receptors for MIRV binding and internalisation [2, 5]. Biomarker Tests are thus required. FR α expression is not uniform throughout the tumour, and thus, a single biopsy may not be representative of all tumour areas [5].

Another Problem is Resistance. Tumors may change after treatment, and FR α expression can be reduced or more heterogeneous. Cancer cells may also have other survival factors that reduce the effect of DM4. MIRV is thus a more specific treatment approach, but it has not solved the problem of treatment resistance in platinum-resistant ovarian cancer. Further research will be carried out to investigate the reasons for this resistance and how to optimise patient selection.

6. Future Development

6.1 Combination therapy with bevacizumab

Combination therapy can also be employed to expand the scope of MIRV. Studies of MIRV plus bevacizumab have already shown good results [8, 9]. MIRV targets FR α -expressing tumour cells and bevacizumab inhibits angiogenesis; thus, the two drugs may have different effects on tumour growth through different pathways.

Further research has not yet determined the best application scenarios for the above combination. The next experiments will also consider the response ratio, progression-free survival, overall survival and safety. Determine which patients will be more likely to benefit from it and whether the new treatment increases the risk of harm. If the above questions can be answered, MIRV plus bevacizumab may be suitable for some patients with ovarian cancer.

6.2 MIRV as maintenance therapy

MIRV is also being studied for use in maintenance.

Maintenance therapy is given after a person has responded to the previous treatment to prevent a relapse of the disease. GLORIOSA is a trial comparing MIRV plus bevacizumab with bevacizumab alone for maintenance treatment of patients with FR α -high platinum-sensitive ovarian cancer [10]. It is not a study of platinum resistance, but whether MIRV can be added earlier in the treatment cycle.

The results of GLORIOSA may help determine if MIRV has a function other than later-line platinum-resistant disease. If the combination can delay progression in the maintenance stage, it will be another treatment option for patients with FR α -high tumours. However, the conclusion of this use will depend on the final clinical results.

6.3 Improved biomarker testing and expanded patient populations

Improved biomarker tests will also be required in the future for MIRV. Although the Ventana FOLR1 RxDx assay has been employed to assess FR α expression, tumour heterogeneity and potential alterations in FR α over time have made classification challenging [5]. Optimise the Measurement Method for FR α to Reduce Misclassification and Identify Patients Who Will Benefit More.

Other patient groups who have received earlier treatment or combined therapies and follow-up studies will also be included in the future research. The above studies can help determine an optimal time for MIRV application and which patients are more likely to respond positively to it. Ongoing monitoring of toxicity, biomarker tests and resistance will be needed for extended applications of the treatment in different environments.

7. Conclusion

MIRV is an FR α -targeted ADC for patients with FR α -positive platinum-resistant ovarian cancer. The steps in the activity are: FR α binding $\rightarrow$ internalisation $\rightarrow$ DM4 release $\rightarrow$ microtubule disruption $\rightarrow$ tumour cell death. FR α is necessary for the above process, so biomarker tests are used to select suitable patients for treatment.

Development of MIRV can be observed in the

FORWARD I, SORAYA and MIRASOL trials. FORWARD I demonstrated the difficulty of using FR α -targeted treatment without sufficiently refined patient selection, whereas SORAYA showed significant activity in FR α -high disease. MIRASOL then provided phase III data showing that MIRV could increase the objective response rate, progression-free survival and overall survival compared with standard chemotherapy [6]. MIRV still has deficiencies, such as ocular adverse events, variability in FR α expression, and the risk of resistance. Future work may explore other applications for MIRV in combination or maintenance therapy and improve biomarker detection. MIRV is a typical case of how to improve the selectivity of ovarian cancer treatment through biomarker-based therapy for patients with limited options after platinum resistance.

References

- [1] Havasi, A., Cainap, S. S., Havasi, A. T., & Cainap, C. (2023). Ovarian cancer—Insights into platinum resistance and overcoming it. *Medicina*, 59(3), 544. <https://doi.org/10.3390/medicina59030544>
- [2] Menon, R., Bako, E., Liu, S., Stec, J., Thakur, S., Deutschman, E., Ab, O., & Jain, S. (2026). Mirvetuximab soravtansine: Mechanism of action, clinical and translational science. *Clinical and Translational Science*, 19, e70447. <https://doi.org/10.1111/cts.70447>
- [3] Matulonis, U. A., Lorusso, D., Oaknin, A., Pignata, S., Dean, A., Denys, H., Colombo, N., Van Gorp, T., Konner, J. A., Romeo Marin, M., Harter, P., Murphy, C. G., Wang, J., Noble, E., Esteves, B., Method, M., & Coleman, R. L. (2023). Efficacy and safety of mirvetuximab soravtansine in patients with platinum-resistant ovarian cancer with high folate receptor alpha expression: Results from the SORAYA study. *Journal of Clinical Oncology*, 41(13), 2436–2445. <https://doi.org/10.1200/JCO.22.01900>
- [4] Moore, K. N., Oza, A. M., Colombo, N., Oaknin, A., Scambia, G., Lorusso, D., Konecny, G. E., Banerjee, S., Murphy, C. G., Tanyi, J. L., Hirte, H., Konner, J. A., Lim, P. C., Prasad-Hayes, M., Monk, B. J., Pautier, P., Wang, J., Berkenblit, A., Vergote, I., & Birrer, M. J. (2021). Phase III, randomized trial of mirvetuximab soravtansine versus chemotherapy in patients with platinum-resistant ovarian cancer: Primary analysis of FORWARD I. *Annals of Oncology*, 32(6), 757–765. <https://doi.org/10.1016/j.annonc.2021.02.017>
- [5] Zannoni, G. F., Santoro, A., d'Amati, A., D'Alessandris,

- N., Scaglione, G., Padial Urtueta, B., Valente, M., Narducci, N., Addante, F., Spadola, S., Bragantini, E., & Angelico, G. (2025). Folate receptor alpha in advanced epithelial ovarian cancer: Diagnostic role and therapeutic implications of a clinically validated biomarker. *International Journal of Molecular Sciences*, 26(11), 5222. <https://doi.org/10.3390/ijms26115222>
- [6] Moore, K. N., Angelergues, A., Konecny, G. E., García, Y., Banerjee, S., Lorusso, D., Lee, J.-Y., Moroney, J. W., Colombo, N., Roszak, A., Tromp, J., Myers, T., Lee, J.-W., Beiner, M., Cosgrove, C. M., Cibula, D., Martin, L. P., Sabatier, R., Buscema, J., ... Van Gorp, T. (2023). Mirvetuximab soravtansine in FR α -positive, platinum-resistant ovarian cancer. *New England Journal of Medicine*, 389(23), 2162–2174. <https://doi.org/10.1056/NEJMoa2309169>
- [7] Hendershot, A., Slabaugh, M., Riaz, K. M., Moore, K. N., O'Malley, D. M., Matulonis, U., & Konecny, G. E. (2023). Strategies for prevention and management of ocular events occurring with mirvetuximab soravtansine. *Gynecologic Oncology Reports*, 47, 101155. <https://doi.org/10.1016/j.gore.2023.101155>
- [8] O'Malley, D. M., Matulonis, U. A., Birrer, M. J., Castro, C. M., Gilbert, L., Vergote, I., Martin, L. P., Mantia-Smaldone, G. M., González Martín, A., Bratos, R., Penson, R. T., Malek, K., & Moore, K. N. (2020). Phase Ib study of mirvetuximab soravtansine, a folate receptor alpha (FR α)-targeting antibody-drug conjugate, in combination with bevacizumab in patients with platinum-resistant ovarian cancer. *Gynecologic Oncology*, 157(2), 379–385. <https://doi.org/10.1016/j.ygyno.2020.01.037>
- [9] Gilbert, L., Oaknin, A., Matulonis, U. A., Mantia-Smaldone, G. M., Lim, P. C., Castro, C. M., Provencher, D., Memarzadeh, S., Method, M., Wang, J., Moore, K. N., & O'Malley, D. M. (2023). Safety and efficacy of mirvetuximab soravtansine, a folate receptor alpha (FR α)-targeting antibody-drug conjugate, in combination with bevacizumab in patients with platinum-resistant ovarian cancer. *Gynecologic Oncology*, 170, 241–247. <https://doi.org/10.1016/j.ygyno.2023.01.017>
- [10] O'Malley, D. M., Myers, T., Wimberger, P., Van Gorp, T., Redondo, A., Cibula, D., Nicum, S., Rodrigues, M., Backes, F. J., Barlin, J. N., Lewin, S. N., Lim, P., Pothuri, B., Diver, E., Banerjee, S., & Lorusso, D. (2024). Maintenance with mirvetuximab soravtansine plus bevacizumab vs bevacizumab in FR α -high platinum-sensitive ovarian cancer. *Future Oncology*, 20(32), 2423–2436. <https://doi.org/10.1080/14796694.2024.2372241>