보건의료전문가용

Treatment options for advanced / recurrent EC patients : Insights from RUBY trials and Dostarlimab

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남 은 지

PM-KR-DST-PPTX-260001 Jam 2026

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GSK

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치료 차수에 상관없이 모든 dMMR 자궁내막암에 급여 가능한 면역치료제, 젬퍼리 [1-7]

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❖ 허가사항

1차 치료 (젬퍼리 + 카보플라틴 + 파클리탁셀 병용요법):

▶ **새로 진단된 진행성 또는 재발성 자궁내막암**이 있는 성인환자의 치료[2]

2차 치료 (젬퍼리 단독요법):

▶ **이전** 백금기반 전신 화학요법의 치료 중이거나 치료 후 진행을 나타낸 **재발성 또는 진행성** 불일치 복구결함(mismatch repair deficient, **dMMR**)/고빈도 현미부수체 불안정(microsatellite instability-high, **MSI-H**) 자궁내막암이 있는 성인 환자의 치료[2]

References. 식품의약품안전처. 젬퍼리주 의약품상세정보.

❖ 급여사항

dMMR/MSI-H | 진행성 또는 재발성 자궁내막암 — 급여 / 비급여

NEW UPDATE

- ☑ 1차[1] — 젬퍼리® + Paclitaxel + Carboplatin
- ☑ 2차 이상[2] — 젬퍼리® (단독요법)

MMRp/MSS | 전이성 또는 재발성 자궁내막암

- ☑ 1차 이상[3] — 젬퍼리® + Paclitaxel + Carboplatin

투여 단계 | 1차 (first line)

항암 요법 | Dostarlimab + paclitaxel + carboplatin

투여 대상 | 진행성(FIGO stage III이상) 또는 재발성 자궁내막암으로 다음을 모두 만족하는 경우

① dMMR/MSI-H인 자궁내막암

② 진행성 자궁내막암 중 FIGO Stage IIIA-IIIC1의 경우는 평가 혹은 측정 가능한 병변이 존재 (단, 병기 IIIC1 진행성 암육종, 장액성, 투명세포, 혼합형(암육종, 장액성, 투명세포 ≥10% 이상), 또는 병기 IIIC2-IV 자궁내막암의 경우는 평가 혹은 측정 가능한 병변 유무 상관 없음)

※ 선행화학요법/수술후보조요법 치료 종료 후 6개월 이후 재발한 경우 포함

※ 이전 PD-1 inhibitor, PD-L1 inhibitor, PD-L2 inhibitor 치료를 받지 않은 경우에 한함

급여 기간 | 1년까지(단, 질병진행시 중단) 급여인정 하되, 1년 내에 최적의 투여기간에 대한 임상결과 미 발표 시 자동 연장하여 최대 2년으로 함.

References. 1. 보건복지부. 고시 제2025-210호. 2. 건강보험심사평가원 공고 제2023-279호. 3. 건강보험심사평가원. 제2025-133호. 암환자에게 처방·투여하는 약제에 대한 공고 개정안내. 개정일: 2025년 6월 5일.

dMMR, deficient mismatch repair; **MMRp,** mismatch repair proficient; **MSI-H,** microsatellite instabilty-high; **MSS,** microsatellite stable.

EC Overview

Incidence and mortality rates of endometrial cancer are rapidly increasing worldwide[1,2]

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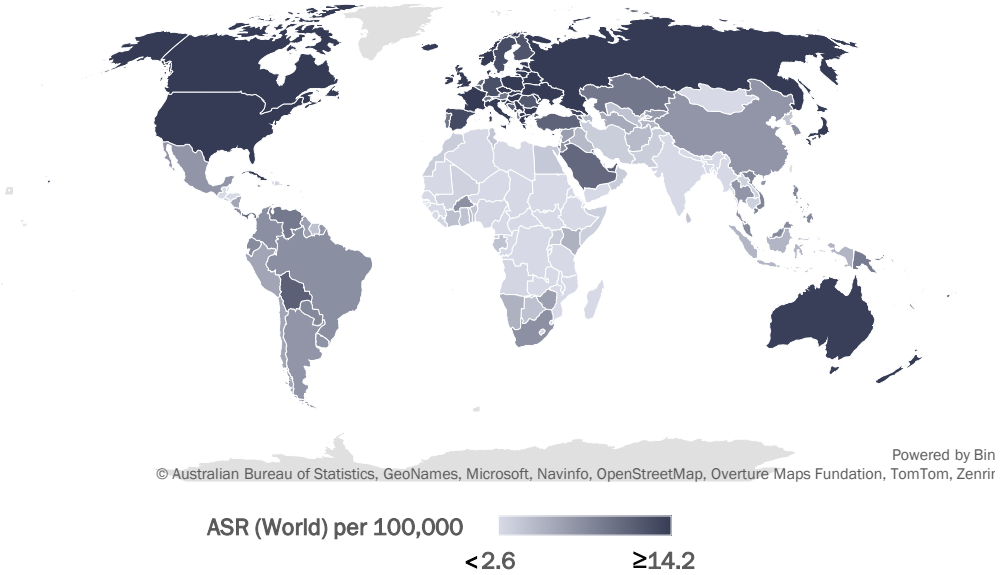
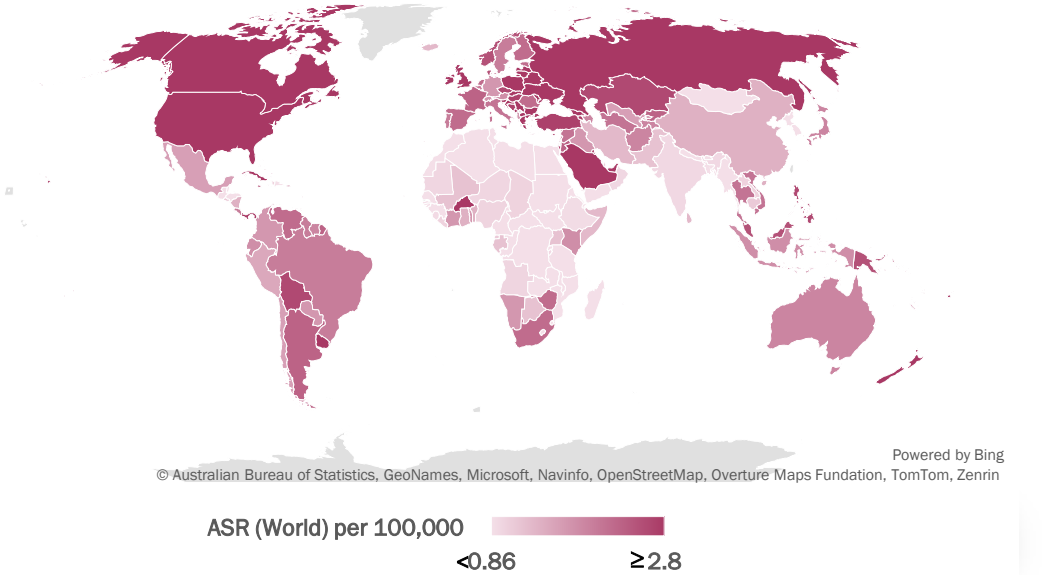
Incidence of EC has been rising with aging and increased obesity of the population, while mortality rates have been increasing by **1.9%** per year on average[3,4]

Incidence and mortality rates worldwide

Estimated age-standardised incidence rates (World) in 2020, corpus uteri, females, all ages[5]*



Estimated age-standardised mortality rates (World) in 2020, corpus uteri, females, all ages[5]*



*Estimated age-standardised incidence and mortality rates (World) in 2020. Data from the Globocan Registry, World Health Organization.[5]

EC, endometrial cancer.

1. Makker V, et al. *Nat Rev Dis Primers*. 2021;7(1):88. **2.** Henley SJ, et al. *Cancer*. 2020;126(10):2225–2249. **3.** Concin N, et al. *Int J Gynecol Cancer*. 2021;31:12–39. **4.** Oaknin A, et al. *Ann Oncol*. 2022;33(9):860–877. **5.** Data source: GLOBOCAN 2020 Graph Production: Global Cancer Observatory (http://gco.iarc.fr/) © International Agency for Research on Cancer 2023.

Endometrial Cancer Epidemiology

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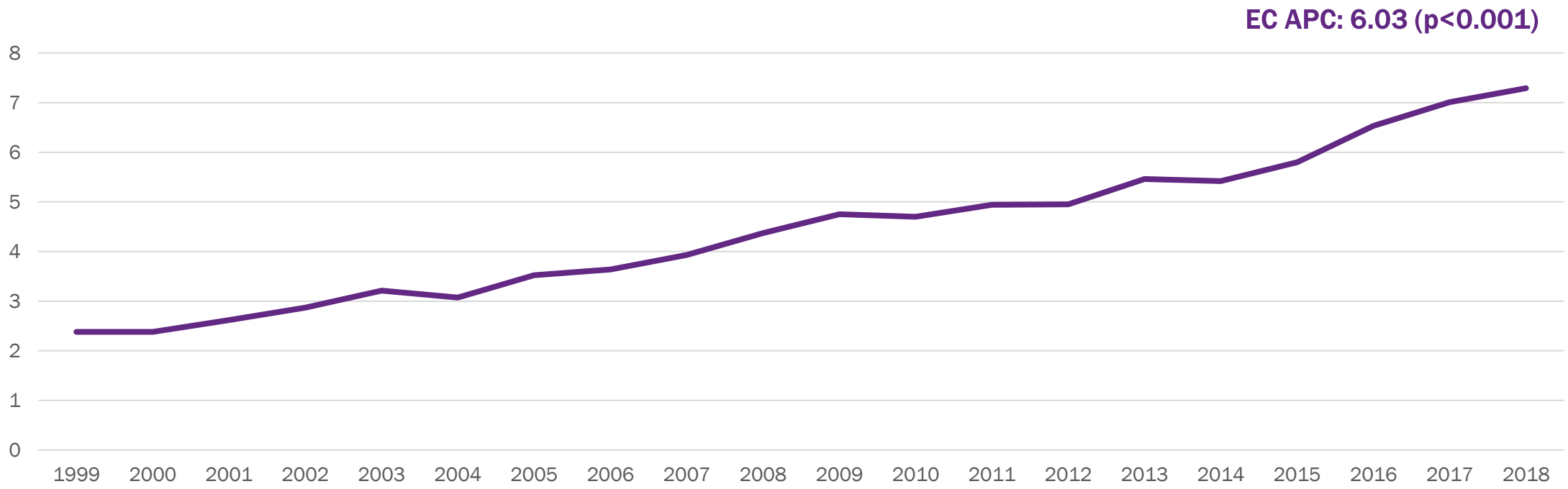
The ASR for endometrial cancer increased from 2.38 per 100,000 in 1999 to **7.29** per 100,000 in 2018 (p<0.001).

ASR of primary endometrial cancer in Korea per 100,000 women, 1999-2018

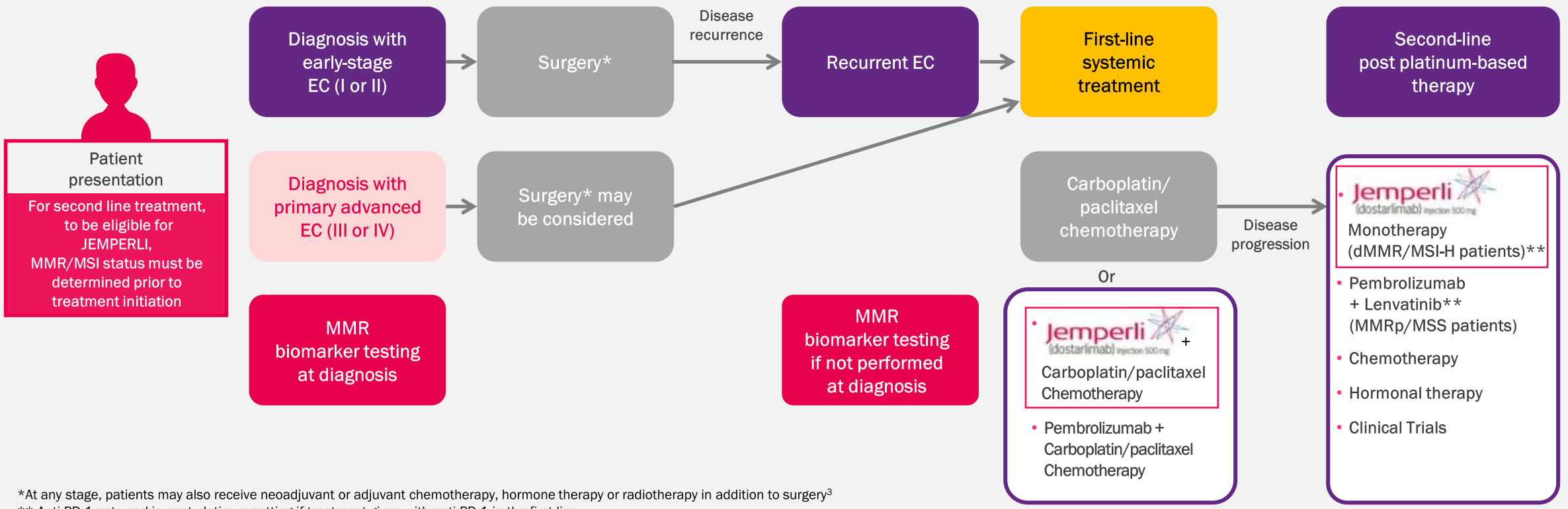


APC, annual percent change; ASR, age-standardized rates

Study design
Women with primary EC diagnosed between 1999 and 2018, and who were followed up with until 2019, were identified from the Korea Central Cancer Registry using the International Classification of Diseases, 10th revision. The ASRs of incidence, APCs, and survival were estimated according to age, stage, histology, and year of diagnosis.

1. Shim SH, et al. Trends in the incidence and survival outcomes of endometrial cancer in Korea: a nationwide population-based cohort study. J Gynecol Oncol. 2024 May;35(3):e32.

Primary Advanced/Recurrent Endometrial Cancer Treatment Pathway[1-5]



*At any stage, patients may also receive neoadjuvant or adjuvant chemotherapy, hormone therapy or radiotherapy in addition to surgery[3]
** Anti-PD-1 not used in post platinum setting if treatment given with anti-PD-1 in the first line.

dMMR, mismatch repair deficient; EC, endometrial cancer; HCP, healthcare professional; IHC, immunohistochemistry, MMR, mismatch repair; MSI, microsatellite instability; MSI-H, microsatellite instability-high.

1. Oaknin, A. et al. Endometrial cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. Ann Oncol 2022; 33(9); 860-877 https://doi.org/10.1016/j.annonc.2022.05.009 . 2. NICE guidance. TA779. Dostarlimab for previously treated advanced or recurrent endometrial cancer with high microsatellite instability or mismatch repair deficiency. Published: 16 March 2022 Available at: https://www.nice.org.uk/guidance/ta779. Last accessed Apr 2025 3. Oaknin, A. et al. Endometrial cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. Ann Oncol 2022; 33(9); 860-877 https://doi.org/10.1016/j.annonc.2022.05.009. 4. Oaknin, A. et al. Safety, Efficacy, and Biomarker Analyses of Dostarlimab in Patients with Endometrial Cancer: Interim Results of the Phase I GARNET Study. Clin Cancer Res 2023; https://doi.org/10.1158/1078-0432. 5. Miller DS, Filiaci VL, Mannel RS, et al. Carboplatin and Paclitaxel for Advanced Endometrial Cancer: Final Overall Survival and Adverse Event Analysis of a Phase III Trial (NRG Oncology/GOG0209).

Effective Treatment Options are Needed for Patients with Advanced or Recurrent Endometrial Cancer

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63 Years

Median age at diagnosis[1]

~13% of ECs Recur[3]

9% of ECs are advanced at time of diagnosis[4]

<1 Year

Overall survival for patients with advanced/recurrent EC failing first-line systemic treatment[5]

EC has the Highest Rate of

dMMR/MSI-H of all solid tumors[2]

dMMR, mismatch repair deficient; EC, endometrial cancer; MSI-H, microsatellite instability-high.

1. Colombo N, et al. Ann Oncol. 2016;27:16–41. / 2. Lorenzi M, et al. J Oncol. 2020;doi.org/10.1155/2020/1807929. / 3. Huijgens AN, Mertens HJ. Facts Views Vis ObGyn. 2013;5:179–186. / 4. National Cancer Institute. Surveillance, Epidemiology, and End Results Program. https://seer.cancer.gov/statfacts/html/corp.html. / 5. Oaknin A, et al. JAMA Oncol. 2020;6:1766–1772.

The Overall Survival Rate for Endometrial Cancer Decreases Sharply as The Stage Progresses[1]

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5-Year Survival Rate[1]

FIGO Stage I: 87%

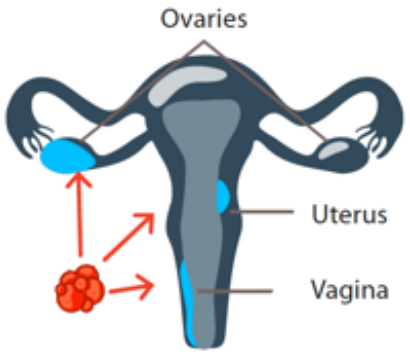
FIGO Stage II: 76%

FIGO Stage III: 57%

FIGO Stage IV: 18%

Stage 3

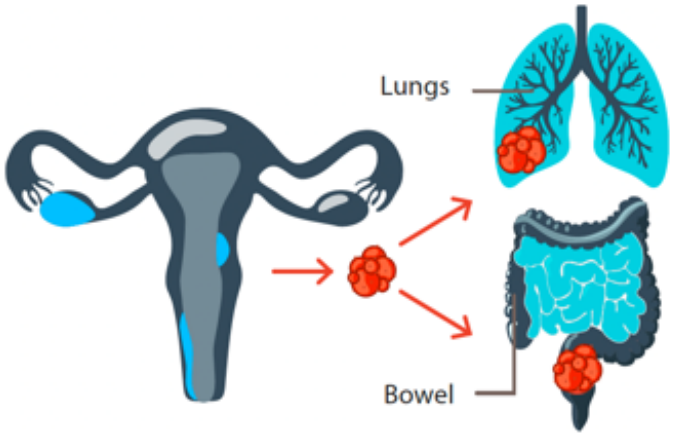
In stage 3 cancer, the cancer may be larger and may have spread to nearby organs.



The cancer has spread to the ovaries, vagina, or pelvic lymph nodes.

Stage 4

In stage 4 cancer, the cancer has spread to more distant areas of the body.



The cancer has spread to the lungs, bowel, or other areas of the body.

1. Reynaers EA, et al. J Surg Oncol. 2015 May;111(6):790-4. 2. 2021년 암등록통계

Poor Outcomes of Current Therapy Options in Clinical Trials.[1-2]

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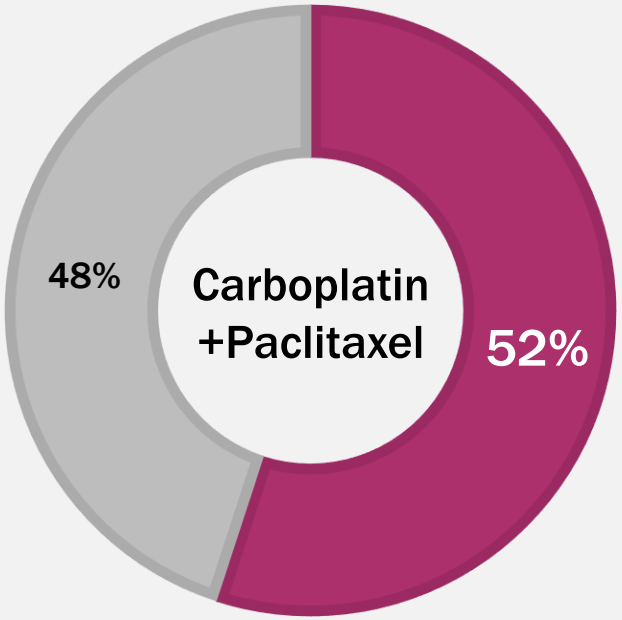
ORR



Chemotherapy Trials

Carboplatin + Paclitaxel	
Trial	GOG 209[1] (2012)
Population (Stage)	Stage 3-4 &Recurrent
N	1328
Regimen	CP
Median PFS	13 months (NS)
Median OS	**37months (NS)**

* CP: carboplatin+ paclitaxel; TAP, paclitaxel-doxorubicin-cisplatin

1. Miller DS, et al. J Clin Oncol 2020 Nov 20;38(33):3841-3850. 2. Bae-Jump VL, et al. Gynecol Oncol. 2020

Immune Checkpoint Inhibitors Have Revolutionized the Therapeutic Landscape in Cancer

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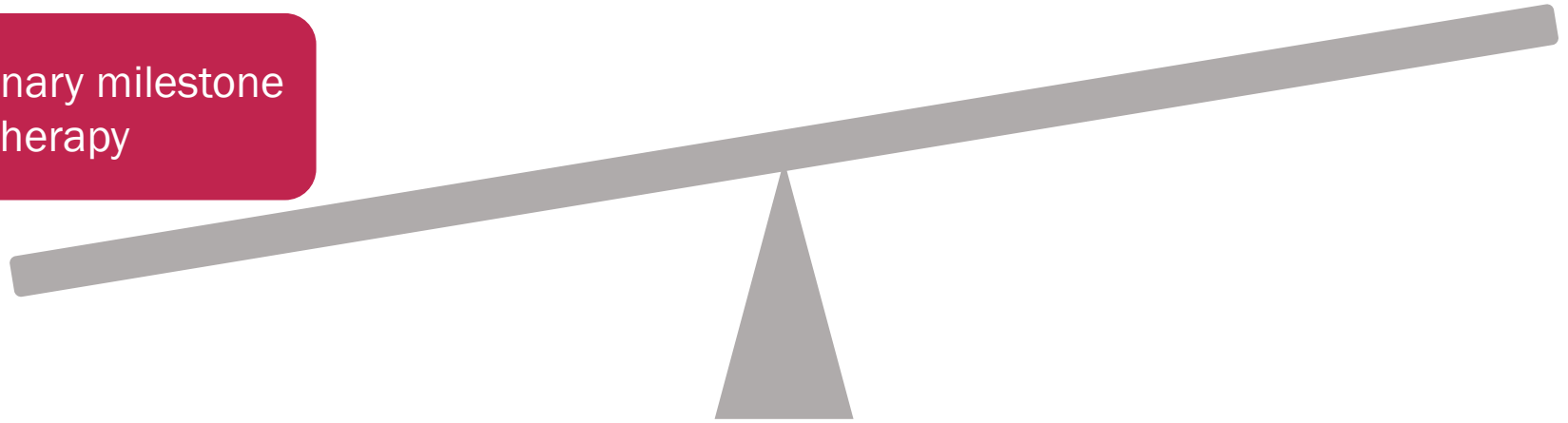
ICI use can be associated with immune-related adverse events

Magnitude of benefit may be mor e pronounced in certain patient subgroups

ICIs are a revolutionary milestone in cancer therapy



Utilization of predictive biomarkers to identify patients suit able for treatment is crucial to ensuring a positive risk/ben efit profile for ICI monotherapy

ICI, immune checkpoint inhibitor. Darvin P, et al. Exp Mol Med 2018;50:1–11.

Endometrial Cancer Treatments

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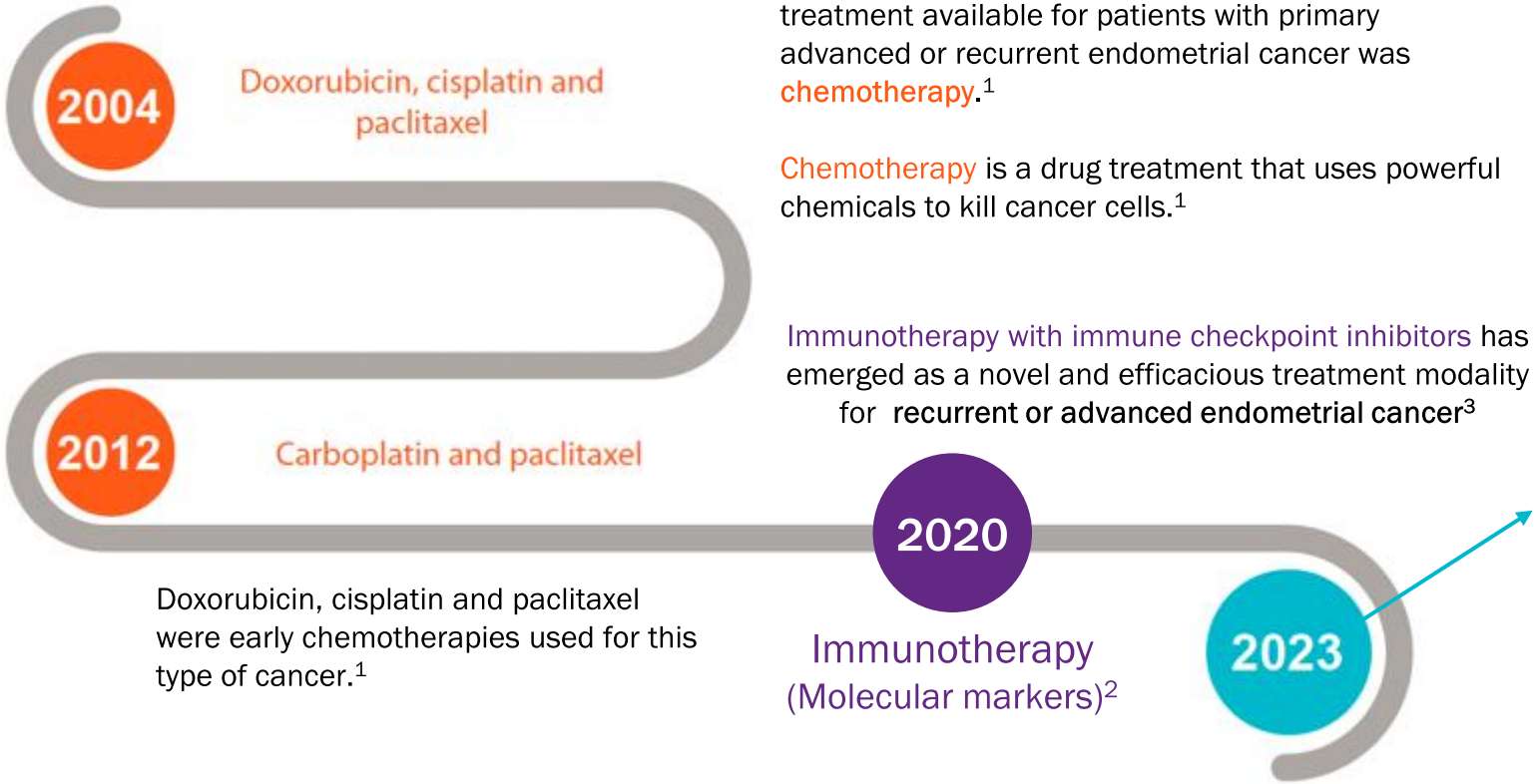

Doxorubicin, cisplatin and paclitaxel were early chemotherapies used for this type of cancer.[1]

For the past 20 years, the primary recommended treatment available for patients with primary advanced or recurrent endometrial cancer was chemotherapy.[1]

Chemotherapy is a drug treatment that uses powerful chemicals to kill cancer cells.[1]

Immunotherapy with immune checkpoint inhibitors has emerged as a novel and efficacious treatment modality for **recurrent or advanced endometrial cancer**[3]

Carboplatin and Paclitaxel became the standard of care for primary advanced or recurrent endometrial cancer.[1]

No new treatments were approved until 2023, when Dostarlimab plus chemotherapy was approved.[1]

1. Mirza MR, et al. A Plain Language Summary of "Dostarlimab for primary advanced or recurrent endometrial cancer". Future Oncol. 2024 Jul 11:1-18. 2. Concin N, et al. ESGO/ESTRO/ESP guidelines for the management of patients with endometrial carcinoma. Int J Gynecol Cancer. 2021 Jan;31(1):12-39. 3. Heffernan K, et al. Previously treated recurrent or advanced endometrial cancer in England: A real-world observational analysis. Gynecol Oncol. 2022 Aug;166(2):317-325.

PD-L1 is an Immune-Inhibitory Molecule Often Co-Opted by Tumors to Promote Tumor Growth

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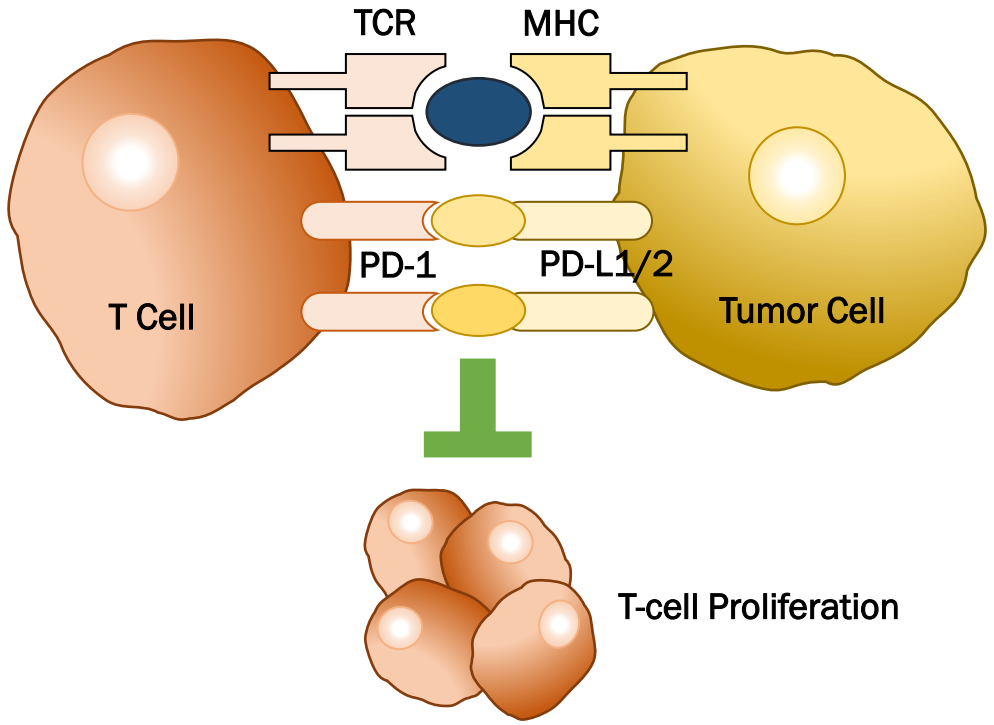
- The PD-1 pathway plays a **vital role in maintaining peripheral tolerance** by suppressing T-cell activity[1,2]
- PD-L1 is **more commonly present** than PD-L2 and may be co-opted by tumor cells to suppress immune surveillance[2]



PD-L1 protein expression emerged as the first potential predictive biomarker for **response to ICIs** in many cancers[2]

Image from: Samra B et al. J Investig Med. 2018;66:1023–1030. ICI, immune checkpoint inhibitor; MHC, major histocompatibility complex; PD-1, programmed cell death protein 1; PD-L1/2, programmed cell death-ligand 1/2; TCR, T-cell receptor.
1. Keir ME, et al. Ann Rev Immunol. 2008;26:677–704. / 2. Davis AA, Patel VG. J Immunother Cancer. 2019;7(1):278.

ICIs Combined with Platinum-Based Chemotherapy Significantly Prolonged PFS and OS in Patients with Advanced or Recurrent EC.

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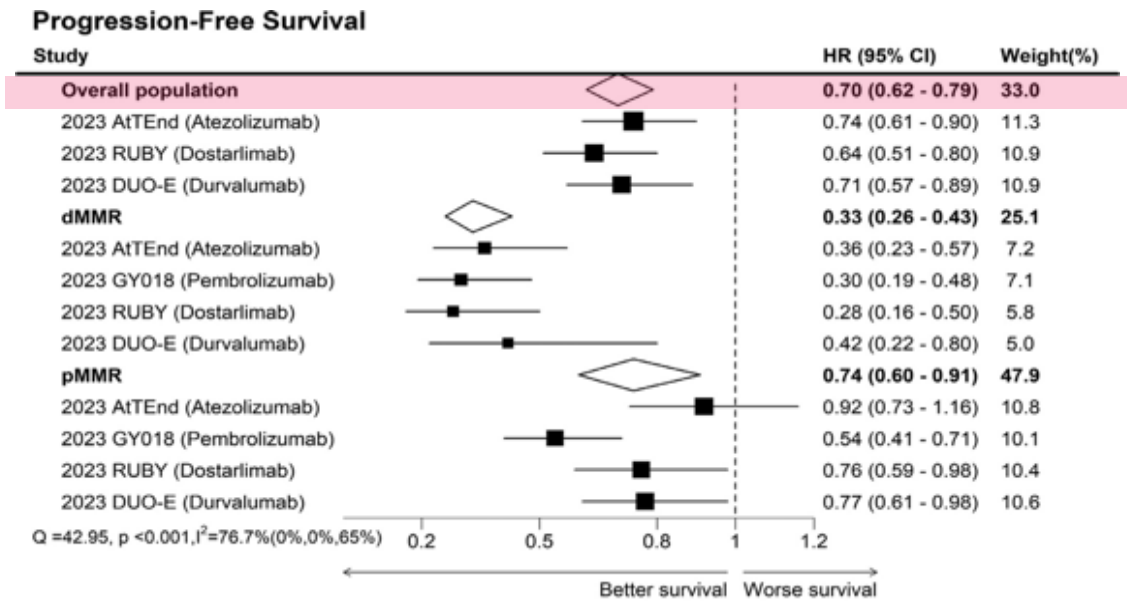

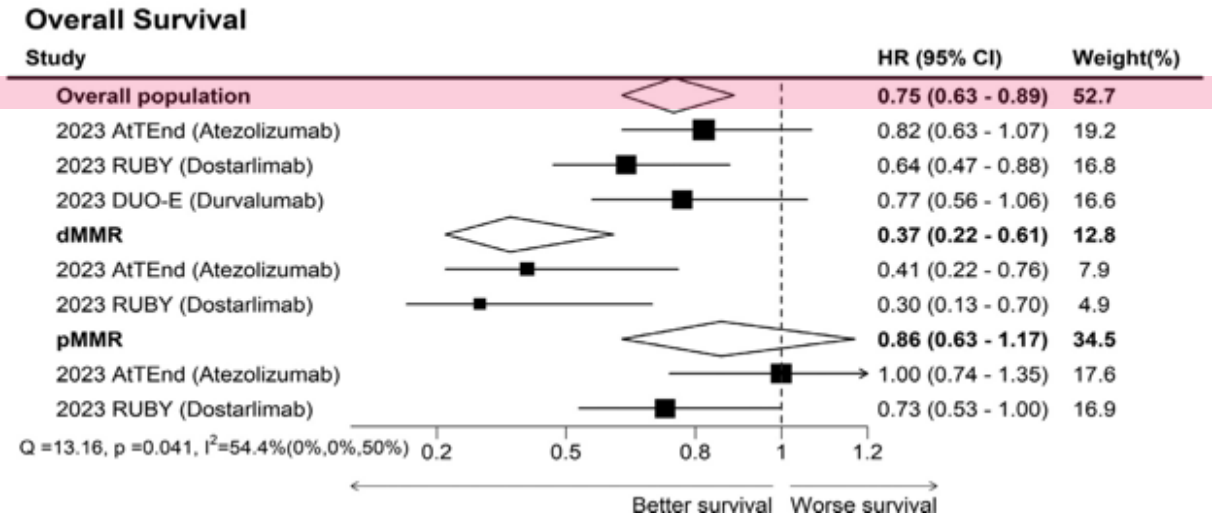

Adding ICIs to conventional platinum-based chemotherapy significantly improves survival outcomes in patients with primary advanced or recurrent endometrial cancer,
as confirmed by a systematic review and meta-analysis of 4 trials involving 2,335 patients.

AtTEnd 연구에 사용된 면역항암제는 국내에서 자궁내막암 치료에 적응증이 없습니다.

ICI, immune checkpoint inhibitors; HR, hazard ratio; CI, confidence interval; OS, overall survival; EC, endometrial cancer; PFS, progression-free survival; MMR, mismatch repair; dMMR, MMR-deficient; MMRp, MMR-proficient

Study design
Researchers conducted a comprehensive review of randomized controlled trials up to November 11, 2023, focusing on immunotherapy combined with chemotherapy versus chemotherapy alone for EC. The primary endpoint was the pooled HR, which was further analyzed across subgroups based on mismatch repair (MMR) status, race, histology, and programmed death-ligand 1 (PD-L1) status. The protocol was registered in PROSPERO (CRD42023475669).

1. Kim JH, et al. Efficacy of immune-checkpoint inhibitors combined with cytotoxic chemotherapy in advanced or recurrent endometrial cancer: A systematic review and meta-analysis. Gynecol Oncol. 2024 Aug;187:85-91.

Molecular groups in Endometrial Cancer

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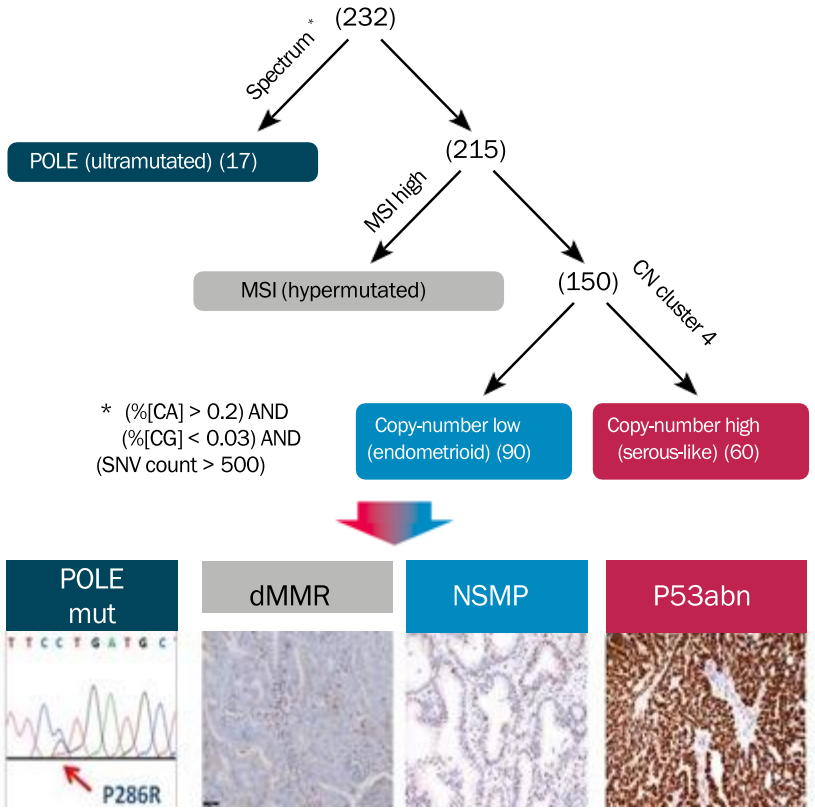
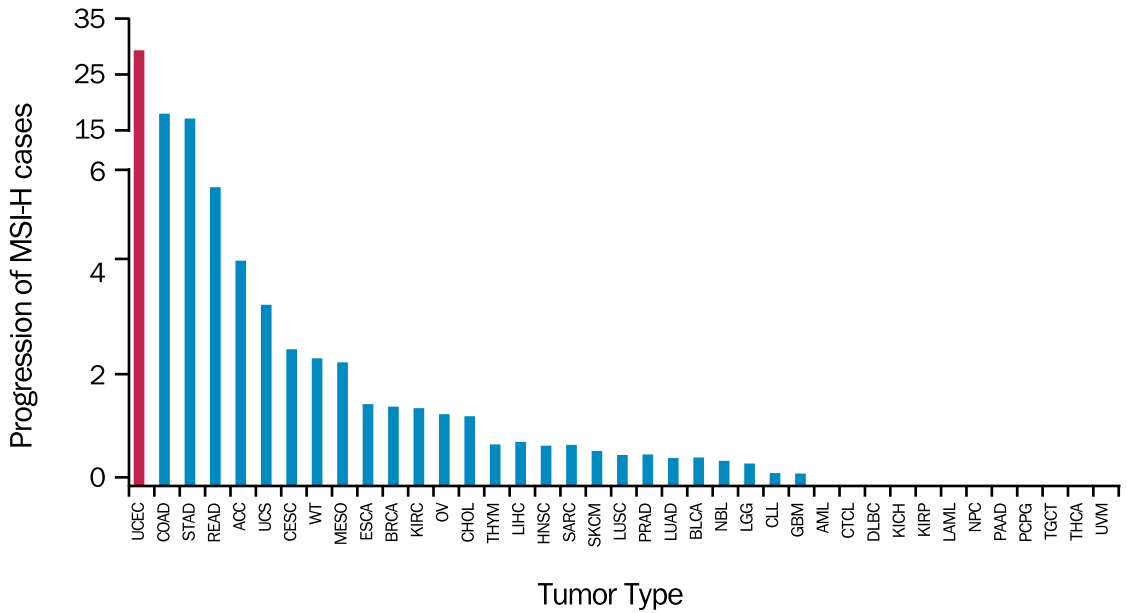
TCGA & Surrogate markers



EC is the solid tumour with the greatest percentage of MSI-H cases: 31%



- Immunohistochemistry for p53 and mismatch repair proteins
- DNA sequencing for POLE exonuclease domain mutations

The Cancer Genome Atlas Research Network. Nature 2013; 497: 67–73; 3. Talhouk A, et al. Cancer 2017; 123: 802–813; Bonneville R, et al. JCO Precis Oncol 2017; 1: PO.17.00073.

MMRp/dMMR definition and various expression

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Molecular Characterization

Patients can be prescribed Jemperli, regardless of MMR status in 1L

MMRp

- 4 MMR proteins* are normally expressed[1]
- MMR intact[2]
- Wild-type group[3]
- MMR proficient or presence[4]
- MMR proficiency[6]
- MMR normal[6]

dMMR

- 1 or more than 1 MMR protein is not expressed[1]
- MMR loss[2]
- Mutant-type group[3]
- MMR-weak or absent[4]
- MMR defect[5]
- MMR deficiency[2]
- MMR deficient[2]
- MMR reduced[6]

dMMR, mismatch repair deficient; MSI-H, microsatellite instability-high; pMMR, proficient mismatch repair; RFS, recurrence-free survival; MMR, mismatch repair; MLH1,mutL homolog 1; PMS2, postmeiotic segregation; MSH2, mutS homolog 2; MSH6, mutS homolog 6.

1. Backes FJ, et al. Cancer. 2019;125(3):398-405 2. Cheng AS, et al. Breast Cancer Res Treat. 2020;179(1):3-10 3.Zhao N, et al. Front Oncol. 2021:11:582244. 4. Guan B, et al. Front Oncol. 2022:12:774202. 5. Park Y, et al. J Gastric Cancer. 2023;23(2):264-274. 6. Federica Z, et al. Cancers. 2022; 14, 2204

Biomarkers in Endometrial Cancer

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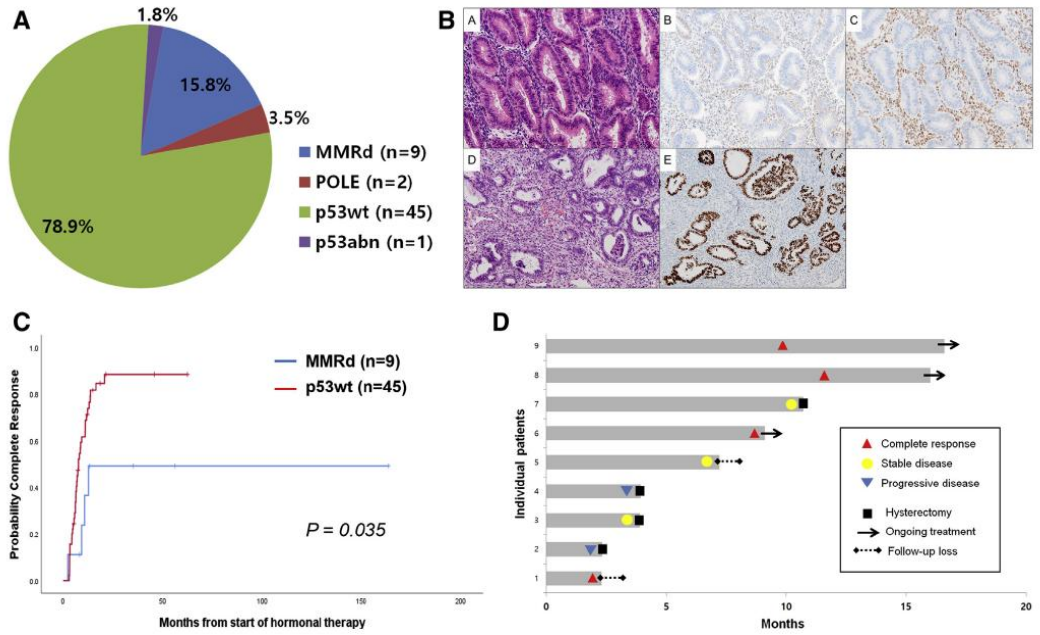
GYNECOLOGY

Mismatch repair status influences response to fertility-sparing treatment of endometrial cancer

Check for updates

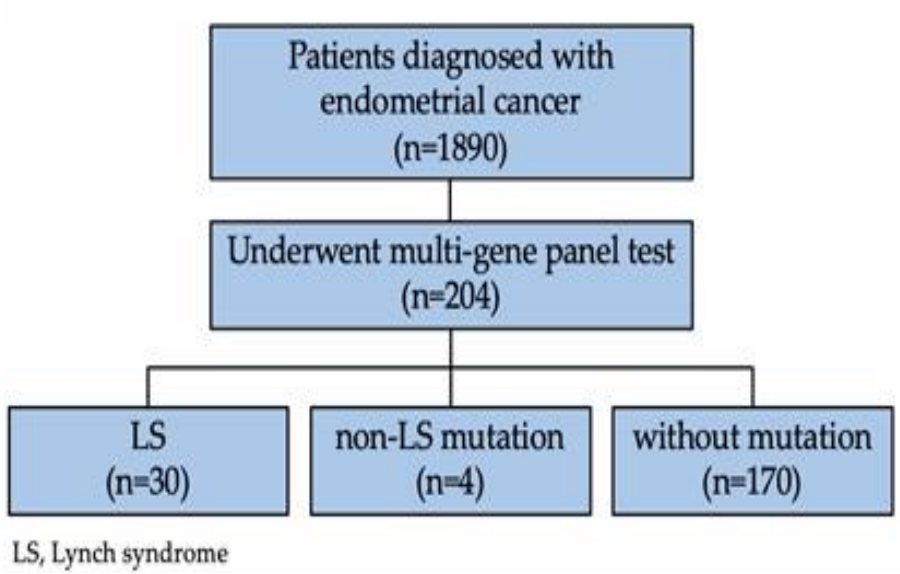
Young Shin Chung, MD; Ha Young Woo, MD, PhD; Jung-Yun Lee, MD, PhD; Eunhyang Park, MD, PhD; Eun Ji Nam, MD, PhD; Sunghoon Kim, MD, PhD; Sang Wun Kim, MD, PhD; Young Tae Kim, MD, PhD



Article

Identification of Lynch Syndrome in Patients with Endometrial Cancer Based on a Germline Next Generation Sequencing Multigene Panel Test

Yoo-Na Kim [1,†], Min Kyu Kim [2,†], Young Joo Lee [1], Youngeun Lee [2], Ji Yeon Sohn [3], Jung-Yun Lee [1,*], Min Chul Choi [4,*], Migang Kim [4], Sang Geun Jung [4], Won Duk Joo [4] and Chan Lee [4]



Left image adapted from Chung YS et al, Mismatch repair status influences response to fertility-sparing treatment of endometrial cancer. Am J Obstet Gynecol. 2021 Apr;224(4):370.e1-370.e13 Right image adapted from Yoo-Na Kim et al, Identification of Lynch Syndrome in Patients with Endometrial Cancer Based on a Germline Next Generation Sequencing Multigene Panel Test Cancers, 2022 Jul 13;14(14):3406.

Guidelines Recommend MMR/MSI Testing[1]

ESMO 권고사항 MMR/MSI Testing(dMMR/MSI-H)

- IHC(Recommendation A)[2] Presence/Absence of MMR protein expression[3]
- PCR(Recommendation B)[4]
- NGS(Recommendation C)[5] Presence/Absence of MMR ptn expression

NCCN 권고사항 MMR/MSI Testing(dMMR/MSI-H)[6]

Test your patients with primary advanced or recurrent endometrial cancer for MMR/MSI status as recommended by National Comprehensive Cancer Network® (NCCN®)[5]

Biomarkers provide prognostic and predictive value in endometrial cancer[5]

1. Backes FJ, et al. Cancer. 2019;125(3):398-405 / 2. Luchini C, et al. Ann Oncol 2019;30:1232–1243. / 3. Ventana MMR RxDx Panel (US FDA Approved). Product Information. Tucson, AZ, USA: Ventana Medical Systems, Inc; 2021. Research Triangle Park, NC, USA: GlaxoSmithKline LLC; 2022. / 4. Biocartis. Technical Sheet IdyllaTM MSI Test. https://www.biocartis.com/sites/default/files/2021-03/Idylla_MSI-IVD_ Tech-Sheet.pdf. Accessed August 12, 2022 / 5. Luchini C et al. Ann Oncol. 2019;30:1232-12431. / 6. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Uterine Neoplasms. V.2.2024. © National Comprehensive Cancer Network, Inc. 2024. All rights reserved. Accessed June 5, 2024. To view the most recent and complete version of the guidelines, go online to NCCN.org.*

Commonly used techniques for measuring genomic and protein biomarkers

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	IHC[1,2]	PCR[2–4]	NGS[4,5]
Analyses	Protein presence; morphologic tissue changes	Genetic sequences	Whole genome; targeted genes
Advantages	Low cost; short turnaround time	Moderate cost; short turnaround time	Provides details on all genomic mutations
Limitations	Tissue fixation may cause variability	Unable to perform highly multiplex assays	Requires specialised equipment; high cost; long turnaround time
Summary	**Accessible and low-cost way to detect expressed proteins**	**Widely used for DNA sequencing; provides accurate quantification and high sensitivity**	**Provides a large amount of genetic information, but only select data have clinical relevance**

DNA, deoxyribonucleic acid; **IHC**, immunohistochemistry; **NGS**, next generation sequencing; **PCR**, polymerase chain reaction.

1. Bellizzi AM, Frankel WL. *Adv Anat Pathol*. 2009;16(6):405–417. **2.** De P, et al. *J Clin Oncol*. 2010;28(28):4289–4292. **3.** Khodakov D, et al. *Adv Drug Deliv Rev*. 2016;105(pt A):3–19. **4.** Dedeurwaerdere F, et al. *Sci Rep*. 2021;11(1):12880. **5.** Behjati S, Tarpey PS. *Arch Dis Child Educ Pract Ed*. 2013;98(6):236–238.

Global Guidelines - NCCN

Jemperli (dostarlimab) Injection 500 mg

- NCCN Guideline recommends Dostarlimab for First- and Second-Line therapy of patients with recurrent EC[1]

Systemic Therapy for Endometrial Carcinoma

Primary or Adjuvant therapy (Stage I-IV)

Chemoradiation Therapy	Systemic Therapy
Preferred Regimen • Cisplatin plus RT followed by carboplatin/paclitaxel	Preferred Regimens • Carboplatin/paclitaxel/pembrolizumab (for stage III–IV tumors, except for carcinosarcoma) (category 1)[b,c,d,e,3,4] • **Carboplatin/paclitaxel/dostarlimab-gxly (for stage III–IV tumors) (category 1)**[d,f,5] • Carboplatin/paclitaxel/durvalumab (for stage III–IV dMMR tumors only)(category 1)[d,g,6] • Carboplatin/paclitaxel/trastuzumab (for stage III–IV HER2-positive uterine serous carcinoma or carcinosarcoma)[d,h,7] • Carboplatin/paclitaxel/bevacizumab (for stage III–IV tumors)[d,8,9] • Carboplatin/paclitaxel[10] Other Recommended • Carboplatin/Paclitaxel/Durvalumab + Durvalumab/Olaparib (for stage III–IV pMMR tumors) (category 2B)[d,11]

1. National Comprehensive Cancer Network (NCCN) Guidelines. Uterine Neoplasms. V1.2025

Global Guidelines - NCCN

Jemperli (dostarlimab) Injection 500 mg

Systemic Therapy for Endometrial Carcinoma

Recurrent

First-line Therapy for Recurrent Disease

Preferred

- Carboplatin/Paclitaxel + Pembrolizumab (except for carcinosarcoma) (category 1)[d,e,1,3]
- **Carboplatin/Paclitaxel + Dostarlimab-gxly (category 1)**[d,1,5]
- Carboplatin/Paclitaxel + Durvalumab (for dMMR only) (category 1)[d,1,6]
- Carboplatin/Paclitaxel + Trastuzumab(for HER2-positive uterine serous carcinoma or carcinosarcoma)[d,h,7]
- Carboplatin/Paclitaxel (category 1 for carcinosarcoma)[m,10]

Other Recommended Regimens

- Carboplatin/docetaxel[n]
- Carboplatin/paclitaxel + bevacizumab[d,8,9]

Useful in Certain Circumstances

- MMR-proficient (pMMR) tumors
  - ►Carboplatin/Paclitaxel/Durvalumab + Durvalumab/Olaparib (category 2B)[d,11]
- Biomarker-directed therapy: after prior platinum-based therapy including neoadjuvant and adjuvant
  - ►pMMR tumors
    - ❖ Lenvatinib + Pembrolizumab (category 1)[12,13]
  - ►TMB-high (TMB-H) tumors[o]
    - ❖ Pembrolizumab[e,14]
  - ►MSI-H/dMMR tumors[P]
    - ❖ Pembrolizumabe,[15]
    - ❖ **Dostarlimab-gxly**[16]

Second-line or Subsequent Therapy

Other Recommended Regimens

- Cisplatin/Doxorubicin[17]
- Cisplatin/Doxorubicin/Paclitaxel[9,17]
- Cisplatin/Gemcitabine[18]
- Cisplatin. Carboplatin. Doxorubicin. Liposomal Doxorubicin. Paclitaxel[19]
- Albumin-bound Paclitaxel". Topotecan· Bevacizumab[S,20]
- Temsirolimus[21]
- CabozantinibLenvatinib[22]
- Gemcitabine[23]
- Docetaxel (category 2B)
- Ifosfamide (for carcinosarcoma)
- Ifosfamide/Paclitaxel (for carcinosarcoma)[24]
- Cisplatin/Ifosfamide (for carcinosarcoma)

Useful in Certain Circumstances (Biomarker-directed therapy)

- pMMR tumors
  - ►Lenvatinib/pembrolizumab (category 1)[12,13]
  - ►Axitinib + Avelumab[25]
- TMB-H tumors[o]
  - ►Pembrolizumab[e,14]
  - ►Ipilimumab + Nivolumab[26]
- MSI-H/dMMR tumors[p]
  - ►Pembrolizumab[e,15]
  - ►**Dostarlimab-gxly**[16]
  - ►Avelumab
  - ►Nivolumab[t,27]
  - ►Tislelizumab-jsgr[28]
  - ►Retifanlimab-dlwr (category 2B)[29]
- HER2-positive tumors (IHC 3+ or 2+)
  - ►Fam-trastuzumab deruxtecan-nxkl[30]
- HER2-positive tumors (IHC 3+ or 2+)
  - ►Fam-trastuzumab deruxtecan-nxkl (for carcinosarcoma)[31]
- *NTRK* gene fusion-positive tumors
  - ►Larotrectinib
  - ►Entrectinib
  - ►Repotrectinib[u,32]
- RET gene fusion-positive tumors
  - ►Selpercatinib

1. NCCN Guidelines Uterine Neoplasms Version 2.2026 – November 14, 2025

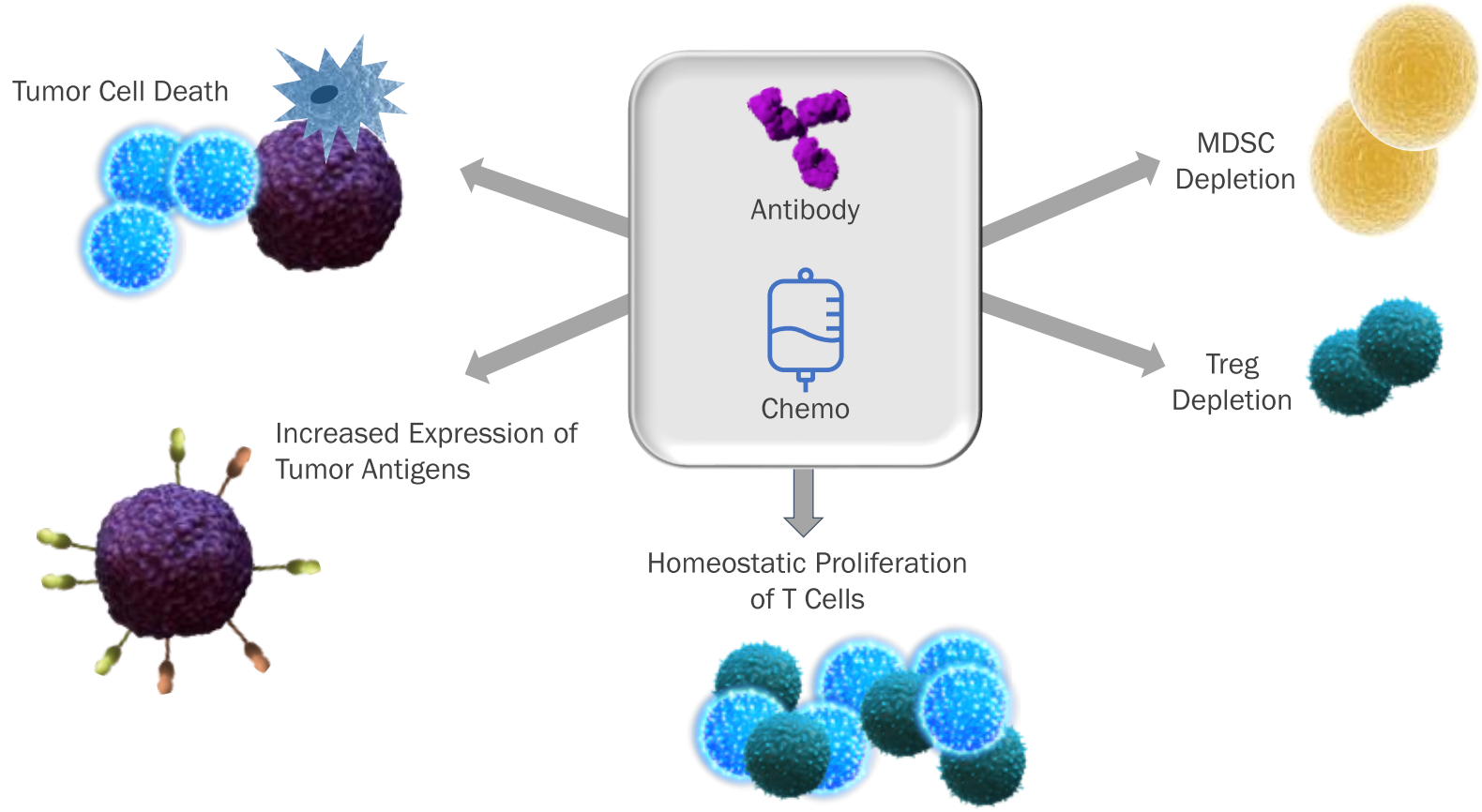
The RUBY Trial:

Clinical Outcomes from 3 Years of Survival Follow-Up

Rationale for RUBY Part 1

Jemperli (dostarlimab) Injection 500 mg

Combination of ICIs with chemotherapy has demonstrated clinical benefit in multiple cancers and may work synergistically by leveraging rapid tumor response, enhanced immunogenic cell-death, and reduced immunosuppression in the tumor microenvironment[1-4]



Chemo, chemotherapy; ICI, immune checkpoint inhibitors; IO, immunotherapy; MDSC, myeloid-derived suppressor cell; Treg, regulatory T cell.

1. Hato SV, et al. Clin Cancer Res. 2014;20:2831-2837. 2. Chen Y, et al. Am J Cancer Res. 2021;11:3445-3460. 3. Pfannenstiel T, et al. Cell Immunol. 2010;263:79-87. 4. Sevko A, et al. J Immunol 2013;190:2464-2471.

RUBY 연구
RUBY: Phase III Study (NCT03981796)

Jemperli (dostarlimab) Injection 500 mg

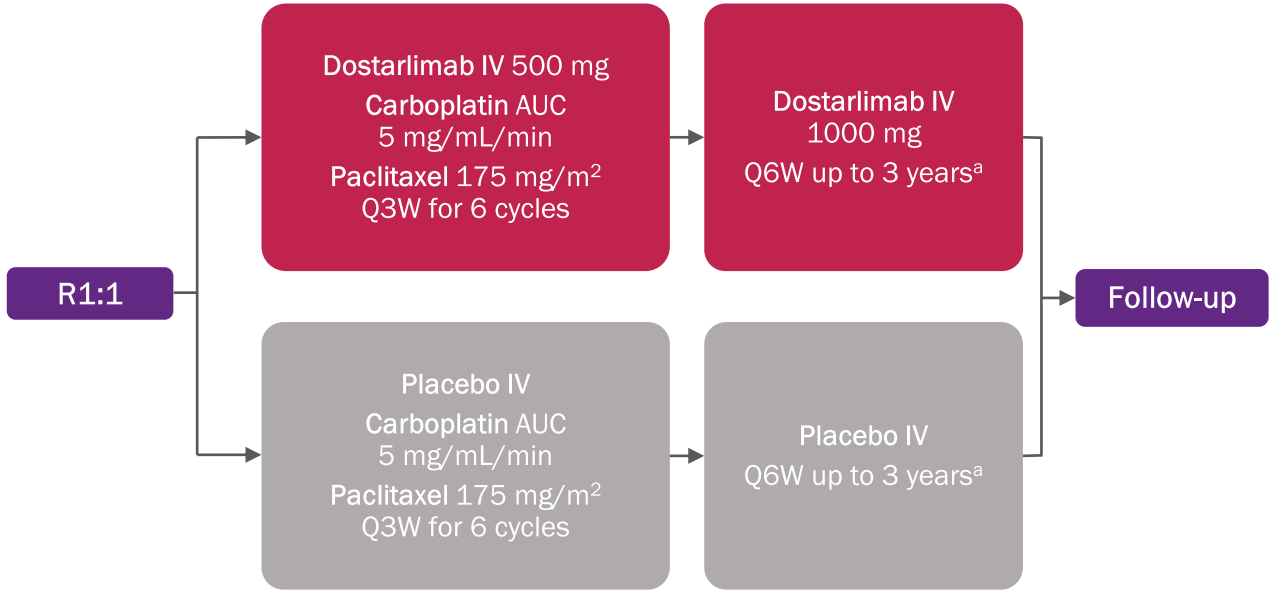
- 젬퍼리 병용투여군과 위약 병용투여군을 나누어 비교한 글로벌, 이중맹검, 무작위 배정, 대조군 비교 3상 임상 연구[1]

Eligible Patients

- Histologically/cytologically proven advanced or recurrent EC
- Stage III/IV disease or first recurrent EC with low potential for cure by radiation therapy or surgery alone or in combination
  - Carcinosarcoma, clear cell, serous, or mixed histology permitted
- Naive to systemic anticancer therapy or had a recurrence or PD ≥6 months after completing systemic anticancer therapy
- ECOG PS 0–1

Stratification

- MMR/MSI status
- Prior external pelvic radiotherapy
- Disease status



Primary Endpoint

- PFS by INV
- OS

Secondary Endpoints

- PFS by BICR
- PFS2
- ORR
- DOR
- DCR
- HRQOL/PRO
- Safety
- PK and immunogenicity

Imaging assessments during the treatment period were performed every 6 weeks (±7 days) from randomization until week 25 (cycle 8), followed by every 9 weeks (±7 days) until week 52. Subsequent imaging was performed every 12 weeks (±7 days) until radiographic progressive disease was documented by investigator assessment in accordance with RECIST, version 1.1, followed by one additional imaging assessment 4 to 6 weeks later, or until subsequent anti-cancer therapy was started, whichever occurred first. Thereafter, scans may be performed per standard of care. a. Mixed carcinoma ≥10% of carcinosarcoma, clear-cell, or serous histologic type. b. Patients underwent randomization on the basis of local or central MMR and MSI testing. Central testing was used when local results were not available. c. Treatment ends after 3 years or until disease progression, treatment discontinuation due to toxic effects, patient withdrawal, investigator decision to withdraw the patient, or death.
AUC, area under the plasma or serum concentration-time curve; BICR, blinded independent central review; DCR, disease control rate; DOR, duration of response, EC, endometrial cancer; IV, administered intravenously; INV, investigator assessment;
MMR, mismatch repair; MSI, microsatellite instability; ORR, overall response rate; OS, overall survival; PFS, progression-free survival; PRO, patient-reported outcome.
1. Mirza MR, et al. N Engl J Med. 2023;388(23):2145-2158.

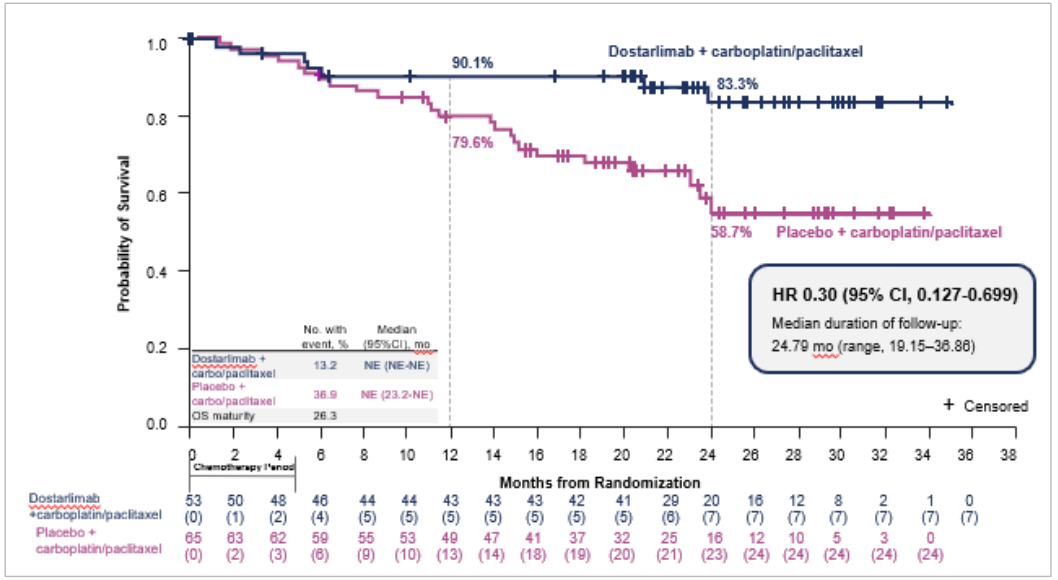
Up-to-date RUBY OS Data

Jemperli (dostarlimab) Injection 500 mg

OS benefit confirmed

2023 SGO[1]

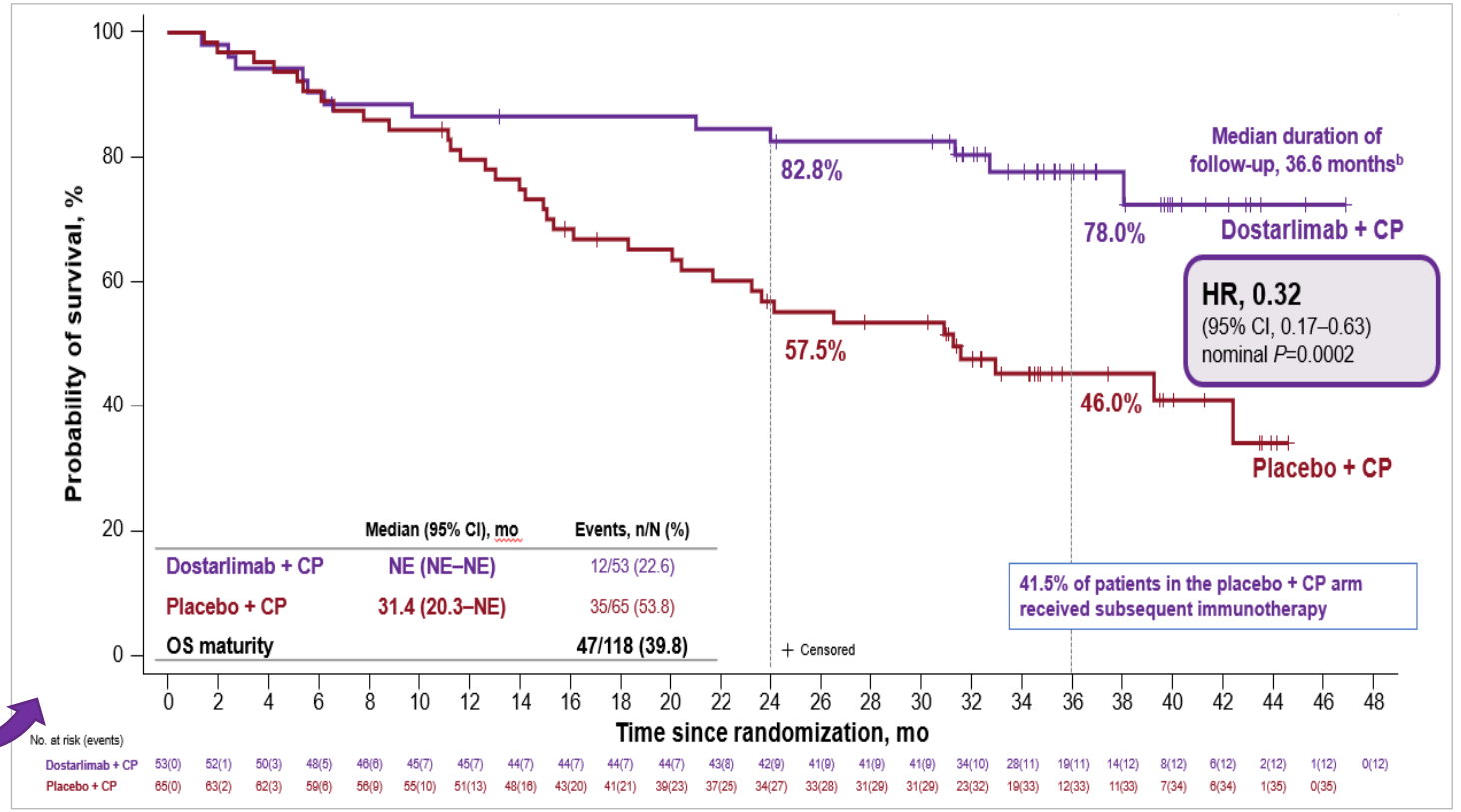
- RUBY Part 1 IA1 OS
- Median duration of follow-up: 24.8 mo.
- dMMR/MSI-H: HR 0.30



+12 months

2024 SGO[2]

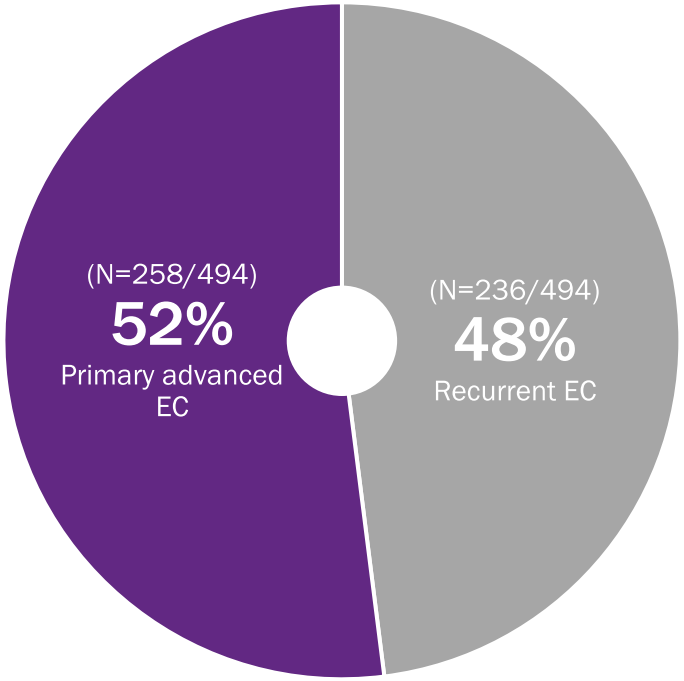
- RUBY Part 1 IA2 OS
- Median duration of follow-up: 36.6 mo.
- dMMR/MSI-H: HR 0.32



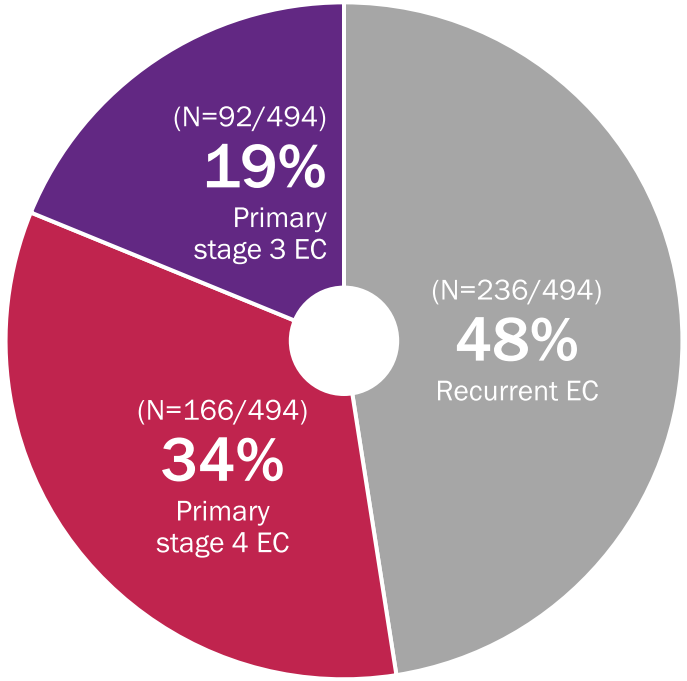
1. Mirza MR, et al. N Engl J Med. 2023;388:2145-2158 2. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

A Total of 494 Patients were Included in the RUBY Study.

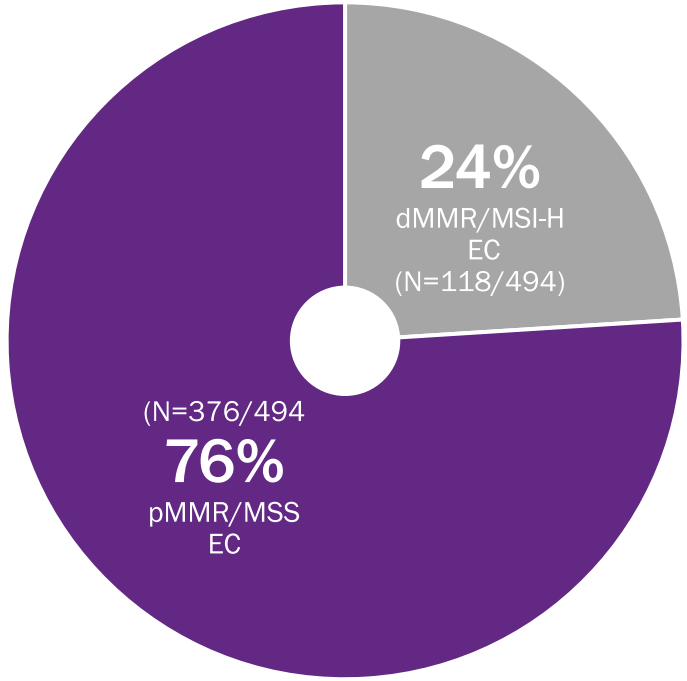
Jemperli (dostarlimab) Injection 500 mg



258 (52%) had primary advanced endometrial cancer, and 236 (48%) had recurrent endometrial cancer.



92 (19%) had stage 3 disease, 166 (34%) had stage 4 disease, and 236 (48%) had recurrent endometrial cancer.



118 (24%) had dMMR/MSI-H tumors, and 376 (76%) had pMMR/MSS tumors.

EC, endometrial cancer; pMMR, mismatch repair-proficient; MSS, microsatellite stable; MSI-H, microsatellite instability-high; dMMR, mismatch repair-deficient

1. Mirza MR, et al. A Plain Language Summary of "Dostarlimab for primary advanced or recurrent endometrial cancer". Future Oncol. 2024 Jul 11:1-18.

RUBY study - Included Diverse, Broad Disease Characteristics

Jemperli (dostarlimab) Injection 500 mg

Diverse Disease Characteristics (N= 494)

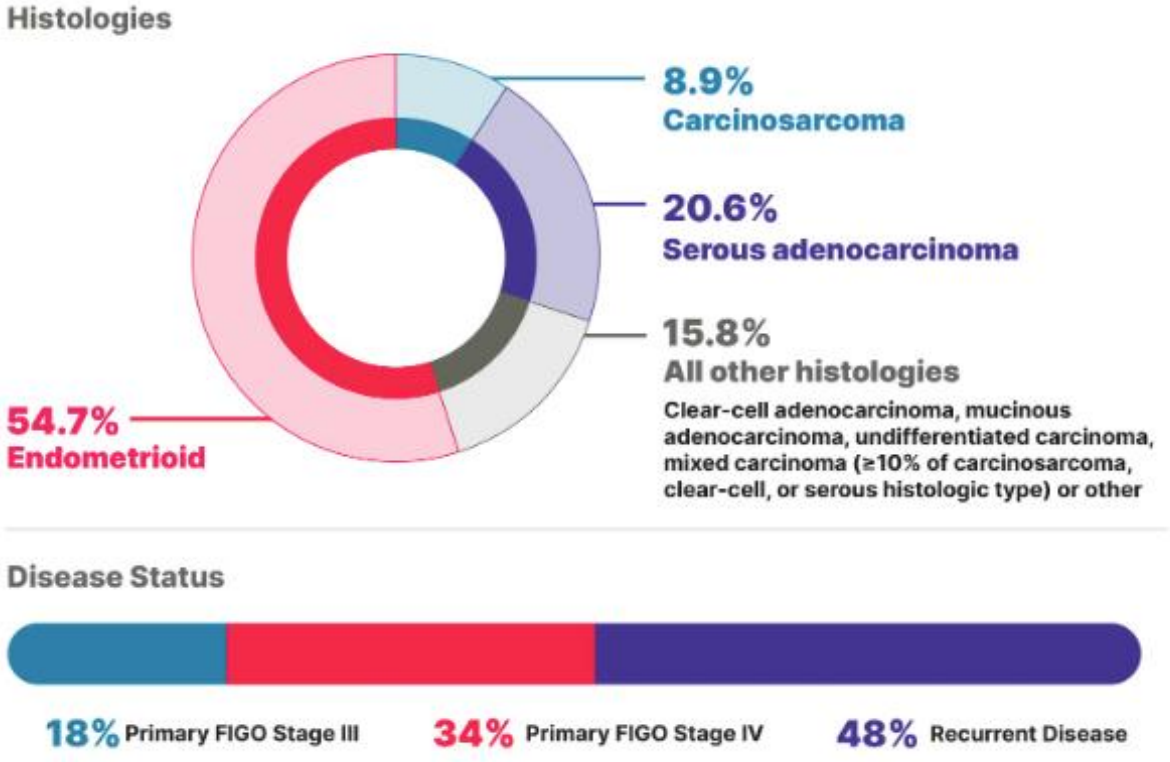


Image adapted from RUBY Efficacy & Study Design | JEMPERLI (dostarlimab-gxly)

Broad Disease Characteristics (Distinguished as Measurable and Non-measurable)

Primary FIGO Stage III or Stage IV disease

Measurable Disease[1]*	Measurable* or Non-Measurable Disease[1]
Stage IIIA-IIIC1	Stage IIIC1 patients with carcinosarcoma, clear cell, serous, or mixed histology (≥10% carcinosarcoma, clear cell, or serous histology)
	Stage IIIC2 or IV

First recurrent endometrial cancer with a low potential for cure by radiation therapy or surgery alone or in combination, including those:
- Naïve to systemic anticancer therapy
- Who had received prior neoadjuvant/adjuvant systemic anticancer therapy

1. Mirza MR, et al. N Engl J Med. 2023;388:2145-2158. 2. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

Summary of Key Efficacy Endpoints

Jemperli (dostarlimab) Injection 500 mg

Consistency of benefit was demonstrated across PFS, PFS2, and OS in dMMR/MSI-H EC patients

Dostarlimab+Chemotherapy (vs Chemotherapy)

	Overall population	dMMR/MSI-H	MMRp/MSS
PFS[1]	Significant 36% reduction in the risk of progression or death	Significant 72% reduction in the risk of progression or death	24% reduction in the risk of progression or death
PFS2[2]	34% reduction in the risk of second disease progression or death	67% reduction in the risk of second disease progression or death	26% reduction in the risk of second disease progression or death
OS[2]	Significant 31% reduction in the risk of death	Significant 68% reduction in the risk of death	Significant 21% reduction in the risk of death

dMMR, mismatch repair deficient; EC, endometrial cancer; MSI-H, microsatellite instability high; PFS, progression-free survival; MMRp, mismatch repair-proficient; MSS, microsatellite stable; OS, overall survival

1. Mirza MR, et al. N Engl J Med. 2023;388(23):2145-2158. 2. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

RUBY Part 1 demonstrated transformational benefit in overall population with the addition of dostarlimab to chemotherapy

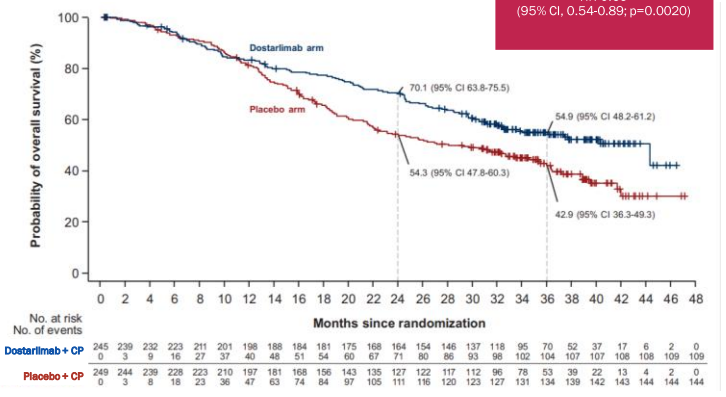
Jemperli (dostarlimab) Injection 500 mg

- Consistent benefit (HR results) across all endpoints, with >70% of patients alive after 2 years

OS (IA2): Overall population[1]

HR: 0.69
(95% CI: 0.54, 0.89)

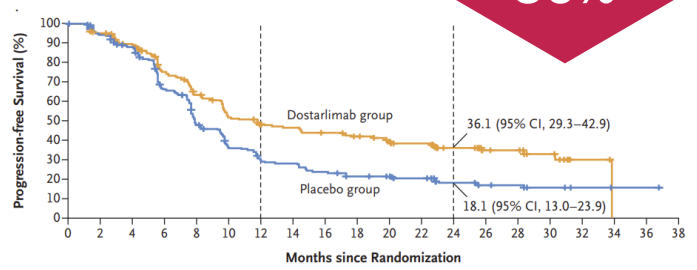
생존기간 연장
16.4개월
(Placebo vs. Dostarlimab)
28.2 mo vs. 44.6 mo
HR 0.69
(95% CI, 0.54-0.89; p=0.0020)



PFS (IA1): Overall population[2]

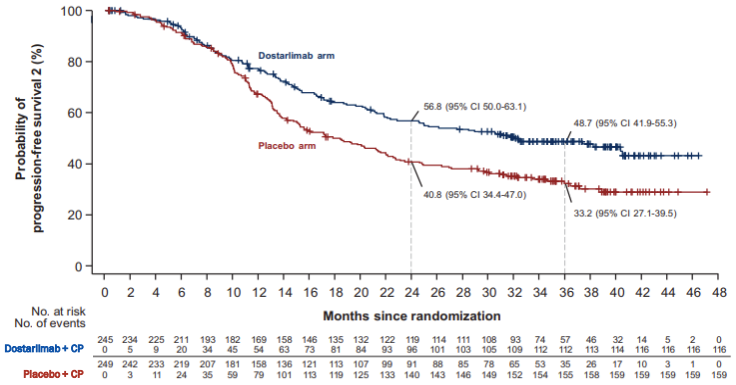
HR: 0.64
(95% CI: 0.51, 0.8)
***P*<0.001**

질병 진행 또는 사망 위험 감소
36%



PFS2 (IA2): Overall population[1]

HR: 0.66
(95% CI: 0.52, 0.84)



69.5% (n=173) of patients in the placebo + CP arm received any follow-up anticancer therapy; of those patients, 54.9% (n=95) received follow-up IO treatment specifically

CI, confidence interval; CP, carboplatin-paclitaxel; HR, hazard ratio; IA, interim analysis; IO, immunotherapy; mo, months; OS, overall survival; PFS, progression-free survival.
1. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

RUBY Part 1 demonstrated transformational benefit in dMMR/MSI-H with the addition of dostarlimab to chemotherapy

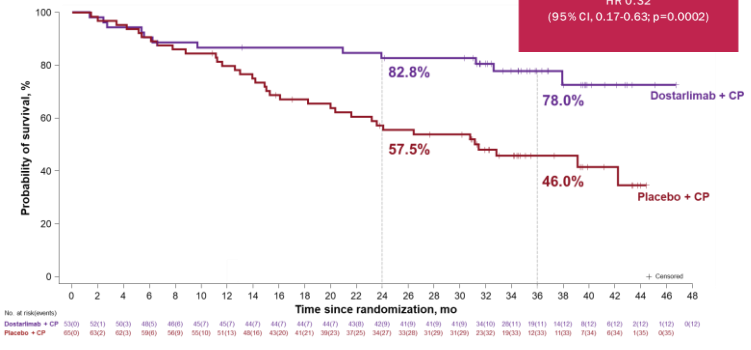
Jemperli (dostarlimab) Injection 500 mg

- Consistent benefit (HR results) across all endpoints, with >80% of patients alive after 2 years

OS (IA2): dMMR/MSI-H[1]

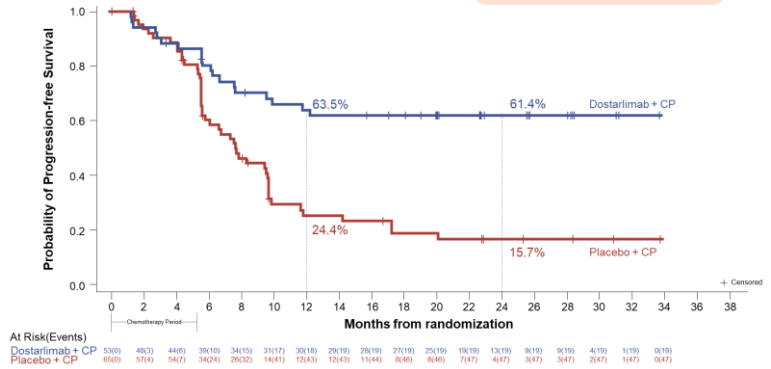
HR: 0.32
(95% CI: 0.17, 0.63)

생존기간 연장
Median OS NR
(Placebo vs. Dostarlimab)
31.4 mo vs. NR
HR 0.32
(95% CI, 0.17-0.63; p=0.0002)



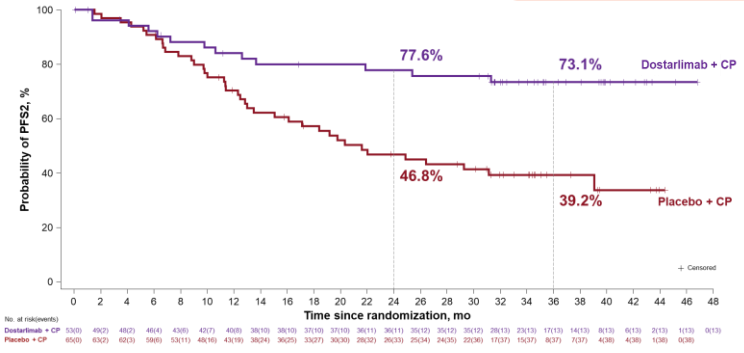
PFS (IA1): dMMR/MSI-H[2]

HR: 0.28
(95% CI: 0.162, 0.495)
***P*<0.0001**



PFS2 (IA2): dMMR/MSI-H[1]

HR: 0.33
(95% CI: 0.18, 0.63)



60% (n=39) of patients in the placebo + CP arm received any follow-up anticancer therapy; of those patients, 69% (n=27) received follow-up IO treatment specifically

CI, confidence interval; CP, carboplatin-paclitaxel; dMMR, mismatch repair deficient; HR, hazard ratio; IA, interim analysis; IO, immunotherapy; mo, months; MSI-H, microsatellite instability-high; OS, overall survival; PFS, progression-free survival.
1. Powell MA, et al. Ann Oncol. 2024;35(8):728-738. 2. Mirza MR, et al. N Engl J Med. 2023;388:2145–58;

RUBY Part 1 was the first trial to show clinically meaningful OS benefit in MMRp/MSS patients

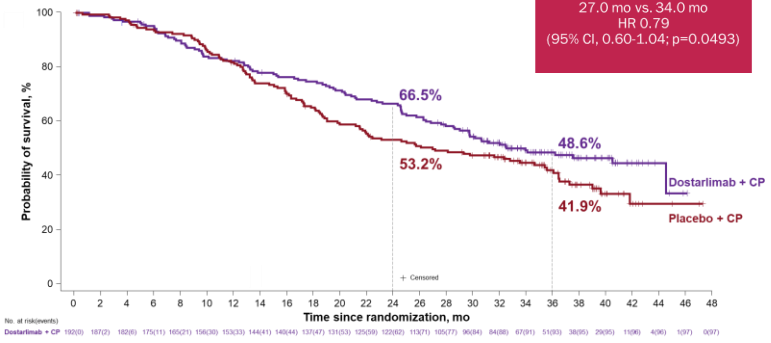
Jemperli (dostarlimab) Injection 500 mg

- Consistent benefit (HR results) across all endpoints, with 7 months median OS benefit and 21% reduced risk of death

OS (IA2): MMRp/MSS[1]

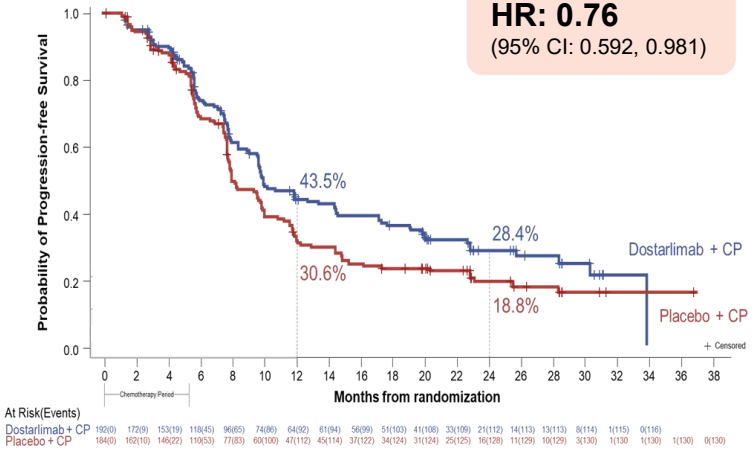
HR: 0.79
(95% CI: 0.60, 1.04)

생존기간 연장
7개월
(Placebo vs. Dostarlimab)
27.0 mo vs. 34.0 mo
HR 0.79
(95% CI, 0.60-1.04; p=0.0493)



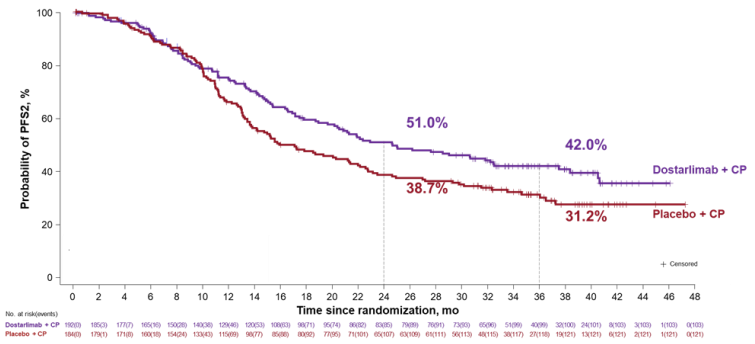
PFS (IA1): MMRp/MSS[2]

HR: 0.76
(95% CI: 0.592, 0.981)



PFS2 (IA2): MMRp/MSS[1]

HR: 0.74
(95% CI: 0.57, 0.97)



73% (n=134) of patients in the placebo + CP arm received any follow-up anticancer therapy; of those patients, 51% (n=68) received follow-up IO treatment specifically

CI, confidence interval; CP, carboplatin-paclitaxel; dMMR, mismatch repair deficient; HR, hazard ratio; IA, interim analysis; IO, immunotherapy; mo, months; MSI-H, microsatellite instability-high; OS, overall survival; PFS, progression-free survival.
1. Powell MA, et al. Ann Oncol. 2024;35(8):728-738. 2. Mirza MR, et al. N Engl J Med. 2023;388:2145–58;

Overall Survival: A Precise, Objective, and Most Relevant Endpoint for Evaluating the Benefit of Novel Oncology Treatment Regimens[1-3]

Jemperli (dostarlimab) Injection 500 mg

While OS is a highly relevant endpoint for patients, HCPs, and regulatory bodies, it can be a challenging endpoint to achieve[1–3]

- Long follow-up periods in large trials
- Includes noncancer deaths
- Impact of subsequent therapies or switching from control to treatment

In the past decade, ~20 trials of novel ICI-based regimens in A/R EC have been conducted and reported OS data, with the majority not reporting OS as a primary endpoint[4–12]

RUBY is a trial that demonstrates an ICI-based regimen that provides a clinically meaningful and statistically significant improvement in OS in primary A/R EC versus standard of care CP[5]

A/R, advanced/recurrent; CP, carboplatin-paclitaxel; EC, endometrial cancer; HCP, healthcare professional; ICI, immune checkpoint inhibitor; OS, overall survival

1. Driscoll JJ, et al. Cancer J. 2009;15(5):401–5; 2. Madariaga A, et al. Int J Gynecol Cancer. 2023;33(3):323–32; 3. https://www.fda.gov/media/71195/download [Accessed 9 June 2025]; 4. Maiorano BA, et al. Front Oncol. 2022;12:844801; 5. Powell MA, et al. Ann Oncol. 2024;35:728–38; 6. Van Gorp T, et al. Ann Oncol. 2024;35:968–80; 7. Colombo N, et al. Lancet Oncol. 2024;25(9):1135–46; 8. Pignata S, et al. Lancet Oncol. 2023;24:286–96; 9. Post CCB, et al. Gyn Oncol. 2022;223–9; 10. Baurain JF, et al. presented at SGO 2024, 16–18 March 2024, San Diego, CA, USA; 11. Kyi C, et al. J Clin Oncol. 2022;40:16_suppl 1. 12. Garside J;Clinical Therapeutics;2023;45;983-990

Ruby study
Subsequent Immunotherapy after first line treatment

Jemperli (dostarlimab) Injection 500 mg

- Despite the Placebo Group Having a Higher Use of Immunotherapy as a Second-Line Treatment, Jemperli Achieved Significantly Higher OS as a First-Line Treatment.
  → Suggesting that Jemperli is effective as a first-line therapy

Variable, n (%)	dMMR/MSI-H		MMRp/MSS		Overall	
	Dostarlimab + CP (N=53)	Placebo + CP (N=65)	Dostarlimab + CP (N=192)	Placebo + CP (N=184)	Dostarlimab + CP (N=245)	Placebo + CP (N=249)
Any follow-up anticancer therapy	**15 (28.3)**	**39 (60.0)**	**105 (54.7)**	**134 (72.8)**	**120 (49.0)**	**173 (69.5)**
Immunotherapy	**8 (15.1)**	**27 (41.5)**	**34 (17.7)**	**68 (37.0)**	**42 (17.1)**	**95 (38.2)**
Pembrolizumab	4 (7.5)	21 (32.3)	9 (4.7)	20 (10.9)	13 (5.3)	41 (16.5)
Pembrolizumab-lenvatinib	3 (5.7)	2 (3.1)	22 (11.5)	43 (23.4)	25 (10.2)	45 (18.1)
Dostarlimab	0	3 (4.6)	0	0	0	3 (1.2)
Other[a]	2 (3.8)	1 (1.5)	3 (1.6)	11 (6.0)	5 (2.0)	12 (4.8)

Data cutoff date: September 22, 2023.
a The category of other includes MK7694A, pembrolizumab-tamoxifen, retifanlimab-epacadostat, investigational product, atezolizumab-ipatasertib, avelumab-axitinib, bevacizumab-atezolizumab, durvalumab-cediranib, durvalumab-olaparib, nivolumab-BMS986207-COM701, nivolumab-lucitanib, and SGN-ALPV.
CP, carboplatin-paclitaxel; dMMR, mismatch repair deficient; MMRp, mismatch repair proficient; MSI-H, microsatellite instability high; MSS, microsatellite stable..

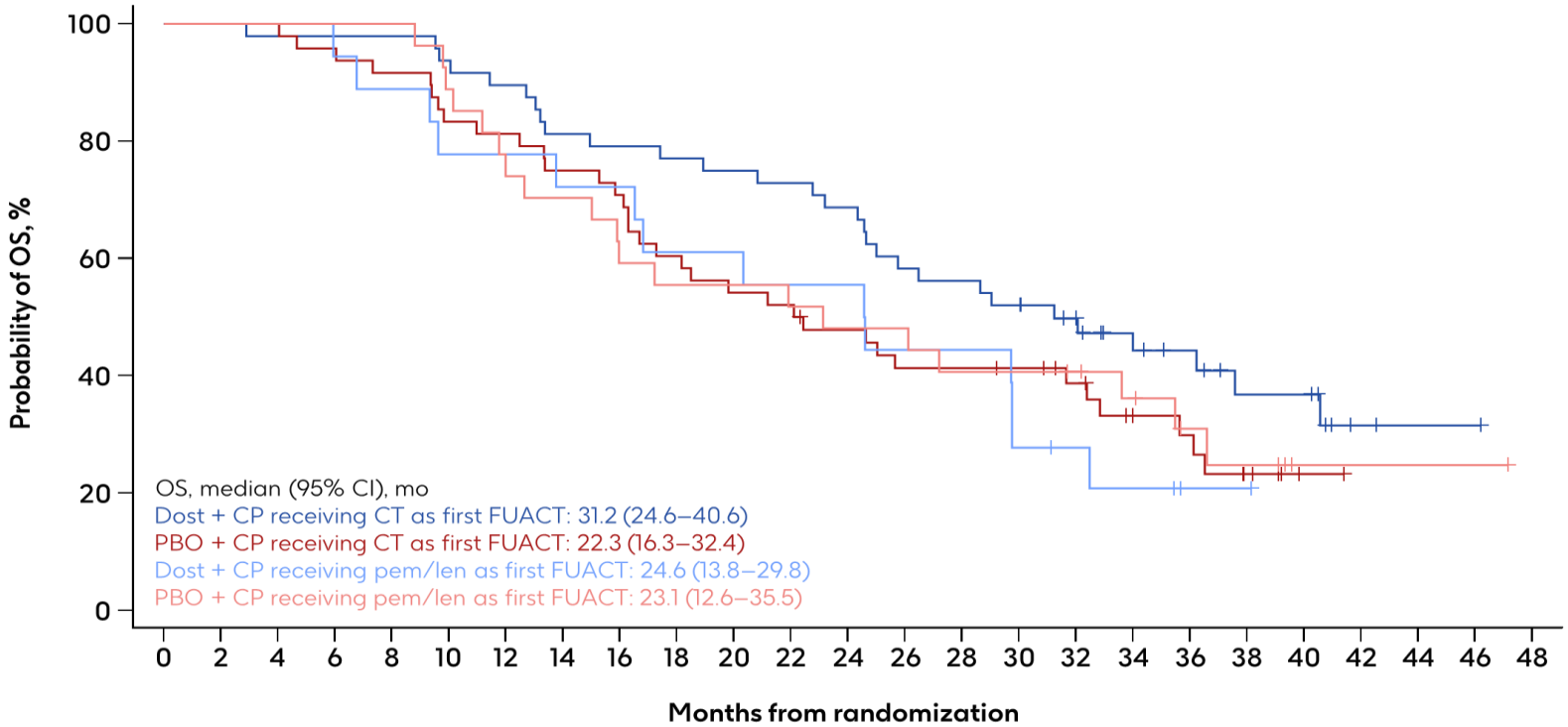
1. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

Post hoc survival outcomes based on initial and subsequent treatment in patients with MMRp/MSS in RUBY trial

Jemperli (dostarlimab) Injection 500 mg

- In patients who received FUACT, OS outcomes favored dostarlimab + CP vs placebo + CP for the first FUACTs evaluated (**Figure 3**)
  - This included patients receiving pem/len as first FUACT after placebo + CP

Figure 3. OS for patients in the MMRp/MSS population who received CT or pem/len as first FUACT



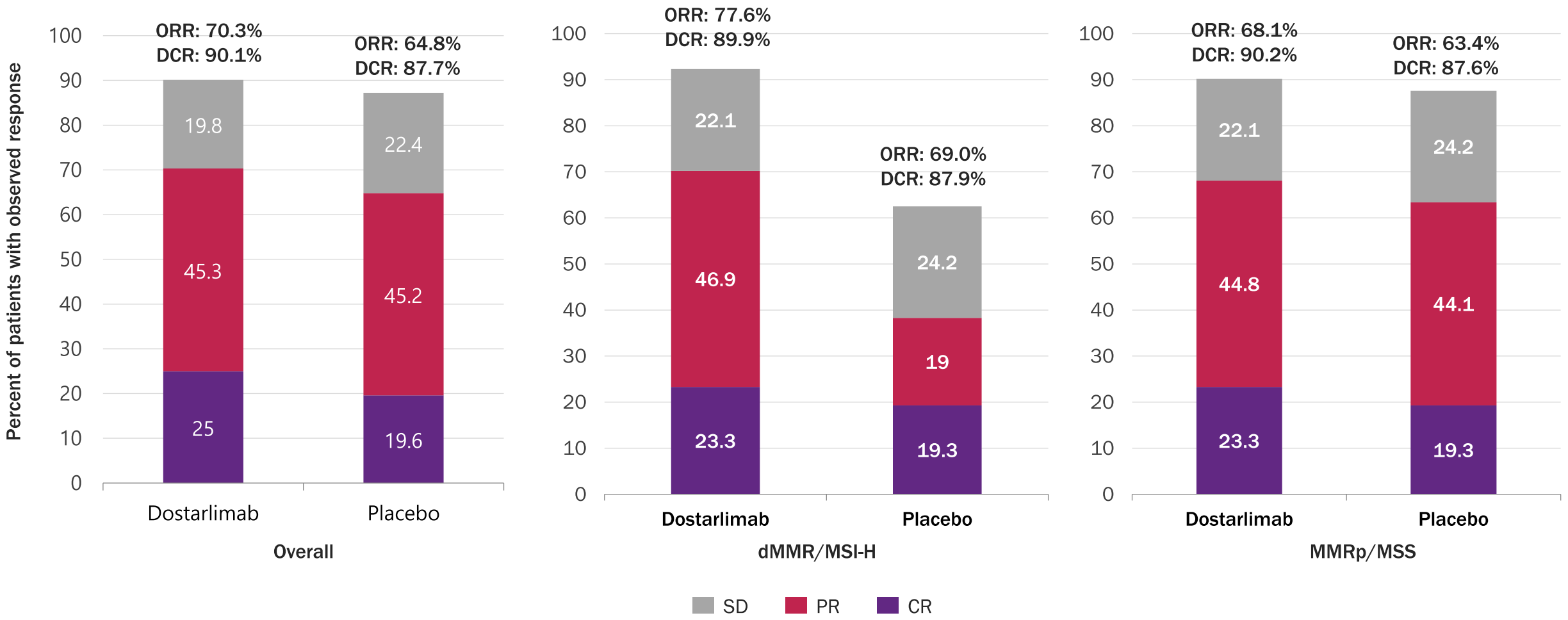
No. at risk (no. of events)

Dost + CP	48 (0)	48 (0)	47 (1)	47 (1)	47 (1)	45 (3)	43 (5)	39 (9)	38 (10)	37 (11)	36 (12)	35 (13)	33 (15)	28 (20)	27 (21)	25 (23)	21 (24)	16 (25)	13 (26)	9 (28)	9 (28)	2 (29)	1 (29)	1 (29)	0 (29)
PBO + CP	48 (0)	48 (0)	48 (0)	46 (2)	44 (4)	40 (8)	39 (9)	36 (12)	34 (14)	29 (19)	26 (22)	25 (23)	22 (25)	19 (28)	19 (28)	18 (28)	15 (29)	11 (31)	9 (32)	5 (34)	1 (34)	0 (34)			
Dost + CP	18 (0)	18 (0)	18 (0)	17 (1)	16 (2)	14 (4)	14 (4)	13 (5)	13 (5)	11 (7)	11 (7)	10 (8)	10 (8)	8 (10)	8 (10)	5 (13)	4 (13)	3 (14)	1 (14)	1 (14)	0 (14)				
PBO + CP	27 (0)	27 (0)	27 (0)	27 (0)	27 (0)	24 (3)	20 (7)	19 (8)	16 (11)	15 (12)	15 (12)	14 (13)	13 (14)	13 (14)	11 (16)	11 (16)	10 (16)	8 (17)	5 (18)	4 (19)	1 (19)	1 (19)	1 (19)	1 (19)	0 (19)

CP, carboplatin-paclitaxel; CT, chemotherapy; dost, dostarlimab; FUACT, follow-up anticancer therapy; MMRp, mismatch repair-proficient; MSS, microsatellite stable; OS, overall survival; PBO, placebo; pem/len, pembrolizumab/lenvatinib.

Powell MA, et al. ESMO 2025; Berlin, Germany. Poster Presentation 1113P.

ORR and DCR – Secondary Endpoints[1]



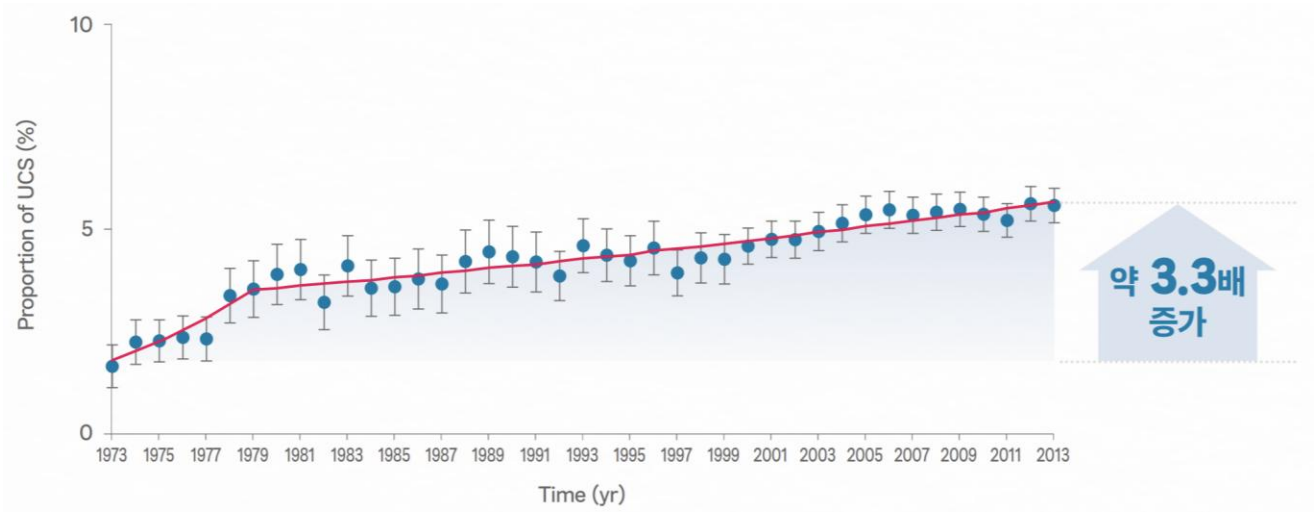
CI, confidence interval; CR, complete response; dMMR, mismatch repair deficient; MSI-H, microsatellite instability-high; ORR, objective response rate; DCR, disease control rate; PD, progressive disease; PR, partial response; SD, stable disease; MMRp, mismatch repair-proficient; MSS, microsatellite stable

1. Mirza MR, et al. N Engl J Med. 2023;388(23):2145-2158.

RUBY study – Carcinosarcoma

Between 1973 and 2013, the proportion of carcinosarcoma among endometrial cancers steadily increased from 1.7% to 5.6%.[1]

Trends of UCS (among all histology types)



- Carcinosarcoma is a highly aggressive cancer with a poor prognosis.[2]

15%
자궁체부암 사망 중
Carcinosarcoma가 차지하는 비율[3]

50%
Carcinosarcoma 환자의
재발률[3]

7.6%
재발 후 5년 생존율[3]
(Survival After Recurrence, SAR)

UCS, uterine carcinosarcoma

1. Matsuo K, et al. Trends of uterine carcinosarcoma in the United States. J Gynecol Oncol. 2018 Mar;29(2):e22. **2.** Cantrell LA, et al. Uterine carcinosarcoma: A review of the literature. Gynecol Oncol. 2015 Jun;137(3):581-8. **3.** Ignatov T, et al. Endometrial cancer subtypes are associated with different patterns of recurrence. J Cancer Res Clin Oncol. 2018 Oct;144 (10):2011-2017.

AE Management

Rates of Immune-related Adverse Events

- Rates of irAEs in Gynecologic Cancers Are Consistent With Rates in Other Tumor Types
- Clinical trials of checkpoint inhibitors in gynecologic cancers have shown a similar incidence and pattern of irAEs compared with other tumor types
- Due to the occurrence of common irAEs in studies of checkpoint inhibitors many clinical trial protocols provide specific management procedures for these events

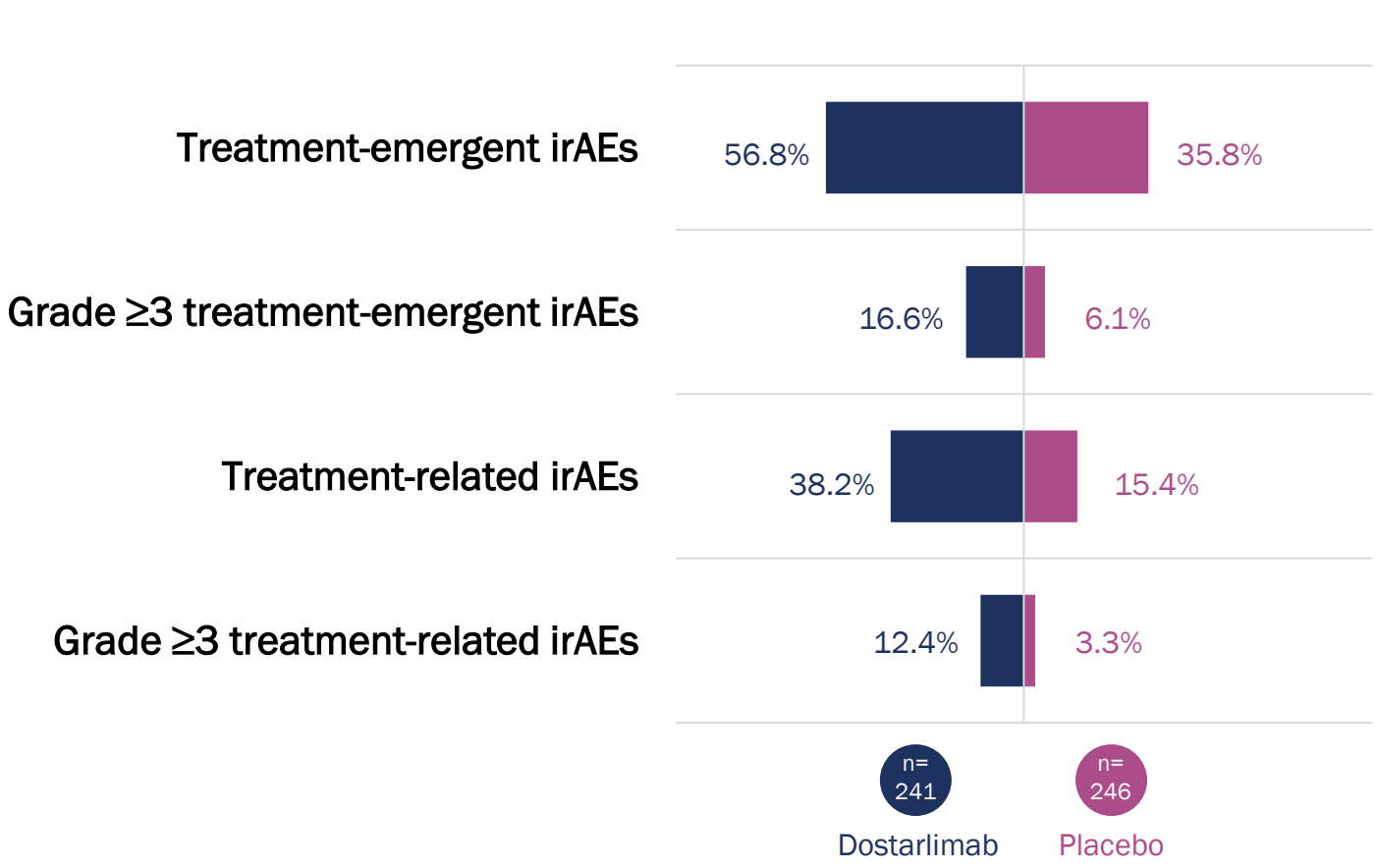
	Checkpoint Inhibitor Therapy	Approximate Incidence of Grade ≥3 irAEs, Range (%)
Endometrial cancer[1,2]	Monotherapy (anti–PD-L1 or anti–PD-1)	0–6[a]
Cervical cancer[3,4]	Monotherapy (anti–PD-L1 or anti–PD-1)	5–17
Ovarian cancer[5-9]	Monotherapy (anti–PD-L1 or anti–PD-1)	2–6
	Combination (anti–PD-1 + PARPi)	6
	Combination (anti–CTLA-4 + anti–PD-1)	Overall rate not reported (most common grade 3/4 irAEs: pancreatic and liver enzyme elevation, anemia, colitis/diarrhea)

[a]KEYNOTE-028 did not report the incidence of grade 3 irAEs; authors reported that no grade 4 irAEs occurred.[1]

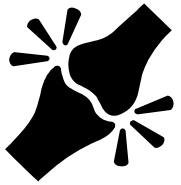
CTLA-4, cytotoxic T-lymphocyte–associated protein 4; irAE, immune-related adverse event; PARPi, poly ADP-ribose polymerase inhibitor; PD-1, programmed cell death 1; PD-L1, programmed death ligand 1.

1. Ott PA, et al. J Clin Oncol. 2017;35(22):2535-41. / 2. Oaknin A, et al. Presented at SGO Annual Meeting, 2019. Abstract 33. / 3. Frenel JS, et al. J Clin Oncol. 2017;35(36):4035-41. / 4. Chung HC, et al. J Clin Oncol. 2019;37(17):1470-8. / 5. Disis ML, et al. JAMA Oncol. 2019;5(3):393-401. / 6. Varga A, et al. Gynecol Oncol. 2019;152(2):243-50. / 7. Matulonis UA, et al. Ann Oncol. 2019;30(7):1080-7. / 8. Konstantinopoulos PA, et al. JAMA Oncol. 2019;5(8):1141-1149. / 9. Burger RA, et al. Presented at IGCS Biennial Meeting, 2018. Abstract OC11.

RUBY Part 1 | Immune-related Adverse Events in the Overall Population



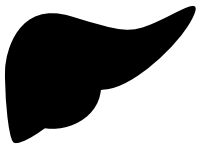
Any Treatment-related irAE ≥5%



Arthralgia
5.8%
6.5%

Hypothyroidism
11.2%
2.8%

Rash
6.6%
2.0%

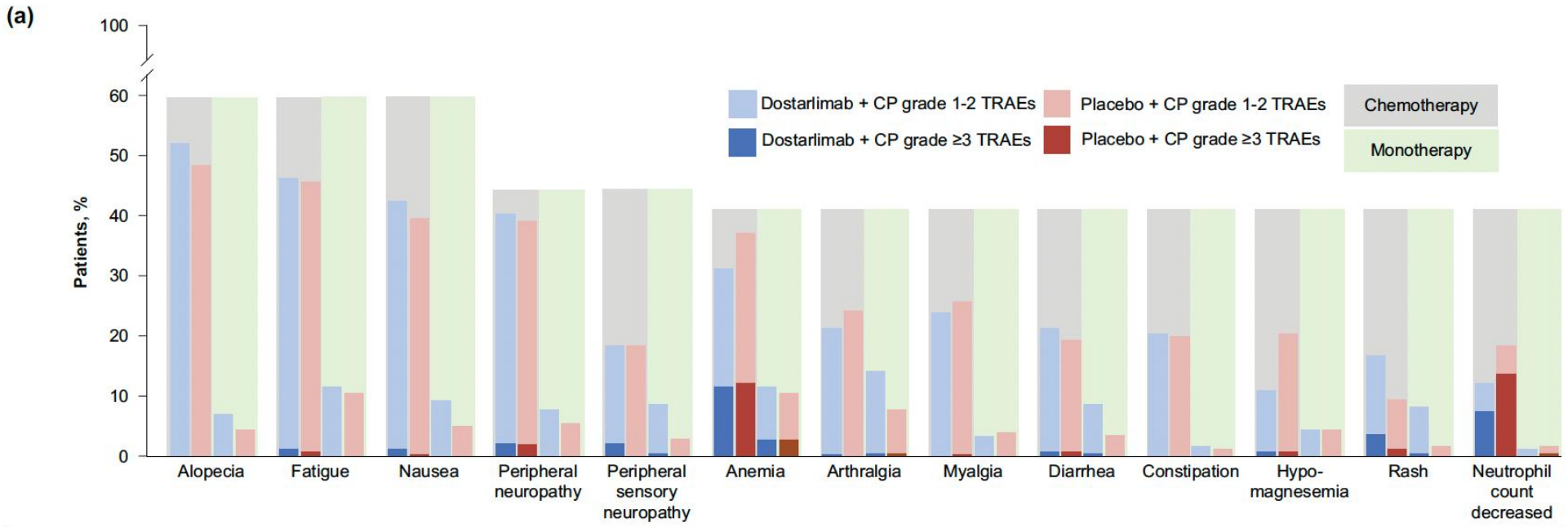


ALT increased
5.8%
0.8%

ALT = alanine aminotransferase; irAE = immune-related adverse event. Mirza MR et al. N Engl J Med 2023; 388:2145-2158.

The Most Common TRAEs Occurred at Similar Rates between Arms and were Mostly Low Grade.

Common TRAEs (⩾15% in either arm) by Treatment Period and Grade



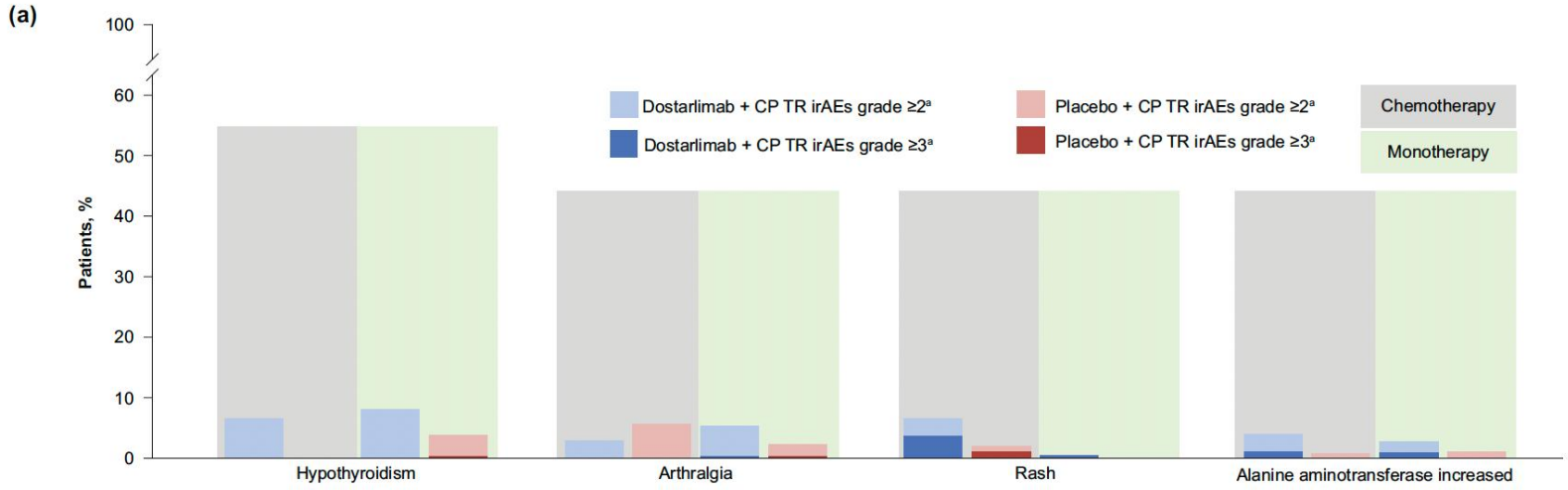
	Alopecia		Fatigue		Nausea		Peripheral neuropathy		Peripheral sensory neuropathy		Anemia		Arthralgia		Myalgia		Diarrhea		Constipation		Hypo-magnesemia		Rash		Neutrophil count decreased	
Dostarlimab + CP TRAEs, n/N (%)	125/241 (51.9)	13/185 (7.0)	111/241 (46.1)	21/185 (11.4)	102/241 (42.3)	17/185 (9.2)	97/241 (40.2)	14/185 (7.6)	44/241 (18.3)	16/185 (8.6)	75/241 (31.1)	21/185 (11.4)	51/241 (21.2)	26/185 (14.1)	57/241 (23.7)	6/185 (3.2)	51/241 (21.2)	16/185 (8.6)	49/241 (20.3)	3/185 (1.6)	26/241 (10.8)	8/185 (4.3)	40/241 (16.6)	15/185 (8.1)	29/241 (12.0)	2/185 (1.1)
Dostarlimab + CP TRAEs grade ≥3, n/N (%)	0	0	3/241 (1.2)	0	3/241 (1.2)	0	5/241 (2.1)	0	5/241 (2.1)	1/185 (0.5)	28/241 (11.6)	5/185 (2.7)	1/241 (0.4)	1/185 (0.5)	0	0	2/241 (0.8)	1/185 (0.5)	0	0	2/241 (0.8)	0	9/241 (3.7)	1/185 (0.5)	18/241 (7.5)	0
Placebo + CP TRAEs, n/N (%)	119/246 (48.4)	8/184 (4.3)	112/246 (45.5)	19/184 (10.3)	97/246 (39.4)	9/184 (4.9)	96/246 (39.0)	10/184 (5.4)	45/246 (18.3)	5/184 (2.7)	91/246 (37.0)	19/184 (10.3)	59/246 (24.0)	14/184 (7.6)	63/246 (25.6)	7/184 (3.8)	47/241 (19.1)	6/184 (3.3)	49/241 (19.9)	2/184 (1.1)	50/246 (20.3)	8/184 (4.3)	23/426 (9.3)	3/184 (1.6)	45/246 (18.3)	3/184 (1.6)
Placebo + CP TRAEs grade ≥3, n/N (%)	0	0	2/246 (0.8)	0	1/246 (0.4)	0	5/246 (2.0)	0	0	0	30/246 (12.2)	5/184 (2.7)	0	1/184 (0.5)	1/246 (0.4)	0	2/246 (0.8)	0	0	0	2/246 (0.8)	0	3/246 (1.2)	0	34/246 (13.8)	1/184 (0.5)

Study design
The objective of this analysis was to identify the occurrence of TRAEs and irAEs and to describe irAE management in Part 1 of the RUBY trial. Design: RUBY is a phase III, randomized, double-blind, multicenter study of dostarlimab plus CP compared with CP alone in patients with primary advanced or recurrent EC. Methods: Patients were randomized 1:1 to dostarlimab 500 mg, or placebo, plus CP every 3 weeks for 6 cycles, followed by dostarlimab 1000 mg, or placebo, every 6 weeks for up to 3 years. Adverse events (AEs) were assessed according to Common Terminology Criteria for Adverse Events,. TRAEs, treatment-related adverse events; irAEs, immune-related adverse events; CP, carboplatin-paclitaxel; TR, treatment-related; AE, adverse event 1. Auranen A, et al. Safety of dostarlimab in combination with chemotherapy in patients with primary advanced or recurrent endometrial cancer in a phase III, randomized, placebo-controlled trial (ENGOT-EN6-NSGO/GOG-3031/RUBY). Ther Adv Med Oncol. 2024 Sep 28;16:17588359241277656.

IrAEs Ocurred in 58.5% of Patients in the Dostarlimab Arm and 37.0% of Patients in the Placebo Arm.

Most common dostarlimab or placebo related irAEs were hypothyroidism, rash, arthralgia, and Alanine aminotransferase increased.

Most common treatment related irAEs (occurring in ⩾5% of patients in either treatment arm)



Dostarlimab + CP TR irAEs ≥2, n/N (%)ª	16/241 (6.6)	15/185 (8.1)	7/241 (2.9)	10/185 (5.4)	16.6/241 (6.6)	1/185 (0.5)	10/241 (4.1)	5/185 (2.7)
Dostarlimab + CP TR irAEs grade ≥3, n/N (%)ª	0	0	0	1/185 (0.5)	9/241 (3.7)	1/185 (0.5)	3/241 (1.2)	2/185 (1.1)
Placebo + CP TR irAEs ≥2, n/N (%)ª	0	7/184 (3.8)	14/246 (5.7)	4/184 (2.2)	5/246 (2.0)	0	2/246 (0.8)	2/184 (1.1)
Placebo + CP TR irAEs grade ≥3, n/N (%)ª	0	1/184 (0.5)	0	1/184 (0.5)	3/246 (1.2)	0	0	0

Study design
The objective of this analysis was to identify the occurrence of TRAEs and irAEs and to describe irAE management in Part 1 of the RUBY trial. Design: RUBY is a phase III, randomized, double-blind, multicenter study of dostarlimab plus CP compared with CP alone in patients with primary advanced or recurrent EC. Methods: Patients were randomized 1:1 to dostarlimab 500 mg, or placebo, plus CP every 3 weeks for 6 cycles, followed by dostarlimab 1000 mg, or placebo, every 6 weeks for up to 3 years. Adverse events (AEs) were assessed according to Common Terminology Criteria for Adverse Events,. TRAEs, treatment-related adverse events; irAEs, immune-related adverse events; CP, carboplatin-paclitaxel; TR, treatment-related; AE, adverse event aTR irAE refers to dostarlimab- or placebo-related irAEs. 1. Auranen A, et al. Safety of dostarlimab in combination with chemotherapy in patients with primary advanced or recurrent endometrial cancer in a phase III, randomized, placebo-controlled trial (ENGOT-EN6-NSGO/GOG-3031/RUBY). Ther Adv Med Oncol. 2024 Sep 28;16:17588359241277656.

Jemperli AE Management

✔ **용량 감량은 권장하지 않습니다.**

다만, 약물이상반응을 관리하기 위해서 이 약의 투여를 보류하거나 중단할 수 있습니다.

면역관련 이상반응 등급에 따른 용량조절 권장사항

Colitis 결장염	**2등급 또는 3등급:** 투여 중지. 중증도 등급 0 또는 1로 회복 시 재 투여 **4등급:** 영구 투여 중단
Hepatitis 간염	**2등급 (AST 또는 ALT가 ULN의 3배 초과~5배로 상승하거나 총 빌리루빈이 정상 상한치의 1.5배 초과~3배로 상승하는 경우):** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여 **3등급 이상 (AST 또는 ALT가 ULN의 5배를 초과하거나 총 빌리루빈이 정상 상한치의 3배를 초과하는 경우):** 영구 투여 중단*
Type 1 diabetes mellitus 제1형 당뇨병	**3등급 또는 4등급 (고혈당):** 투여 중지. 혈당이 적절히 유지되고 임상적, 대사적으로 안정적인 환자에게 재 투여
Hypophysitis or adrenal insufficiency 뇌하수체염 또는 부신 부전	**2등급, 3등급 또는 4등급:** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여. 적절한 호르몬 치료 중에도 재발 또는 악화된 경우 영구 중단
Hypothyroidism or hyperthyroidism 갑상선 저하증 또는 갑상선 항진증	**3등급 또는 4등급:** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여
Pneumonitis 폐염증	**2등급:** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여. 2등급으로 재발 시 영구 중단. **3등급 또는 4등급:** 영구 투여 중단.
Nephritis 신장염	**2등급:** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여. **3등급 또는 4등급:** 영구 투여 중단.
Exfoliative dermatologic conditions 탈락성 피부 병태 (예:SJS,TNE,DRESS)	**의심:** 모든 등급에 대해 투여 중지. 확진되지 않고 중증도 등급 0 또는 1로 회복 시 재 투여. **확진:** 영구 투여 중단.
Myocarditis 심근염	**1등급, 2등급, 3등급 또는 4등급:** 영구 투여 중단.
Neurological toxicities 중증 신경학적 독성 (근육 무력 증후군/중증 근무력증, 길랭-바레 증후군, 뇌염, 횡단성 척수염)	**1등급:** 투여 중지. 중증도 등급 0으로 회복 시 재 투여. 길랭-바레 증후군의 경우, 영구 투여 중단. **2등급, 3등급 또는 4등급:** 영구 투여 중단.
Other immune-mediated adverse reactions involving major organs 주요 장기와 관련된 기타 면역 관련 이상반응	**3등급:** 투여 중지. 중증도 등급 0 또는 1회 회복 시 재 투여. **4등급:** 영구 투여 중단.
Recurrent immune-mediated adverse reactions after severity decreased to Grade 1 or less 중증도 등급1 이하로 감소한 이후 재발한 면역관련 이상반응 (폐염증 제외, 상기 참조)	**3등급 또는 4등급:** 영구 투여 중단.
Other adverse reactions 다른 이상반응	**중증도 등급:** 용량 조절.
Infusion-related reactions 주입관련 이상반응	**2등급:** 투여 중지. 중지 1시간 이내에 회복 시 처음 주입 속도의 50% 속도로 재 투여하거나, 전처치로 증상 회복 시 재 투여 가능. 적절한 전처치에도 2등급으로 재발 시 영구 투여 중단.

*간 전이 환자 중 치료 시작과 함께 AST 또는 ALT의 중증도가 2등급인 경우, AST 또는 ALT가 기저치 대비 50% 이상 증가하고 입주일 이상 지속된다면 투여 중단해야 한다.

치료 차수에 상관없이 모든 dMMR 자궁내막암에 급여 가능한 면역치료제, 젬퍼리 [1-7]

Jemperli (dostarlimab) Injection 500 mg

❖ 허가사항

1차 치료 (젬퍼리 + 카보플라틴 + 파클리탁셀 병용요법):

▶ **새로 진단된 진행성 또는 재발성 자궁내막암**이 있는 성인환자의 치료[2]

2차 치료 (젬퍼리 단독요법):

▶ **이전** 백금기반 전신 화학요법의 치료 중이거나 치료 후 진행을 나타낸 **재발성 또는 진행성** 불일치 복구결함(mismatch repair deficient, **dMMR**)/고빈도 현미부수체 불안정(microsatellite instability-high, **MSI-H**) 자궁내막암이 있는 성인 환자의 치료[2]

References. 식품의약품안전처. 젬퍼리주 의약품상세정보.

❖ 급여사항

dMMR/MSI-H | 진행성 또는 재발성 자궁내막암 — 급여 / 비급여

NEW UPDATE

- ☑ 1차[1] — 젬퍼리® + Paclitaxel + Carboplatin
- ☑ 2차 이상[2] — 젬퍼리® (단독요법)

MMRp/MSS | 전이성 또는 재발성 자궁내막암

- ☑ 1차 이상[3] — 젬퍼리® + Paclitaxel + Carboplatin

투여 단계 | 1차 (first line)

항암 요법 | Dostarlimab + paclitaxel + carboplatin

투여 대상 | 진행성(FIGO stage III이상) 또는 재발성 자궁내막암으로 다음을 모두 만족하는 경우

① dMMR/MSI-H인 자궁내막암

② 진행성 자궁내막암 중 FIGO Stage IIIA-IIIC1의 경우는 평가 혹은 측정 가능한 병변이 존재 (단, 병기 IIIC1 진행성 암육종, 장액성, 투명세포, 혼합형(암육종, 장액성, 투명세포 ≥10% 이상), 또는 병기 IIIC2-IV 자궁내막암의 경우는 평가 혹은 측정 가능한 병변 유무 상관 없음)

※ 선행화학요법/수술후보조요법 치료 종료 후 6개월 이후 재발한 경우 포함

※ 이전 PD-1 inhibitor, PD-L1 inhibitor, PD-L2 inhibitor 치료를 받지 않은 경우에 한함

급여 기간 | 1년까지(단, 질병진행시 중단) 급여인정 하되, 1년 내에 최적의 투여기간에 대한 임상결과 미 발표 시 자동 연장하여 최대 2년으로 함.

References. 1. 보건복지부. 고시 제2025-210호. 2. 건강보험심사평가원 공고 제2023-279호. 3. 건강보험심사평가원. 제2025-133호. 암환자에게 처방·투여하는 약제에 대한 공고 개정안내. 개정일: 2025년 6월 5일.

dMMR, deficient mismatch repair; **MMRp,** mismatch repair proficient; **MSI-H,** microsatellite instabilty-high; **MSS,** microsatellite stable.

RUBY trial- Key Takehome message

Jemperli (dostarlimab) Injection 500 mg

1

The primary endpoints were **PFS** as assessed by the investigator according to RECIST ver1.1, and **OS**.[1]

2

Long-term follow-up study where expected median duration of follow-up was **37.2 months** in the overall population.[2]

3

Including **high-risk patients** such as **carcinosarcoma.**[1]

4

Recurrence or PD within **6 months** of completing systemic anticancer therapy treatment prior to first dose on the study.[1]

5

The phase 3 trial to demonstrate **statistically significant OS improvement** (**HR 0.69** in the overall population (95% CI, 0.54-0.89) stratified log-rank P=0.002) in primary advanced or recurrent EC.[2]

6

Frontline use of dostarlimab + CP in MMRp/MSS provides optimal survival outcomes regardless of subsequent treatment

Jemperli+CP regimen is reimbursed in dMMR/MSI-H primary advanced / recurrent EC patients in Korea.

1. Mirza MR, et al. N Engl J Med. 2023;388(23):2145-2158. 2. Powell MA, et al. Ann Oncol. 2024;35(8):728-738.

Case sharing #1 – MMRp

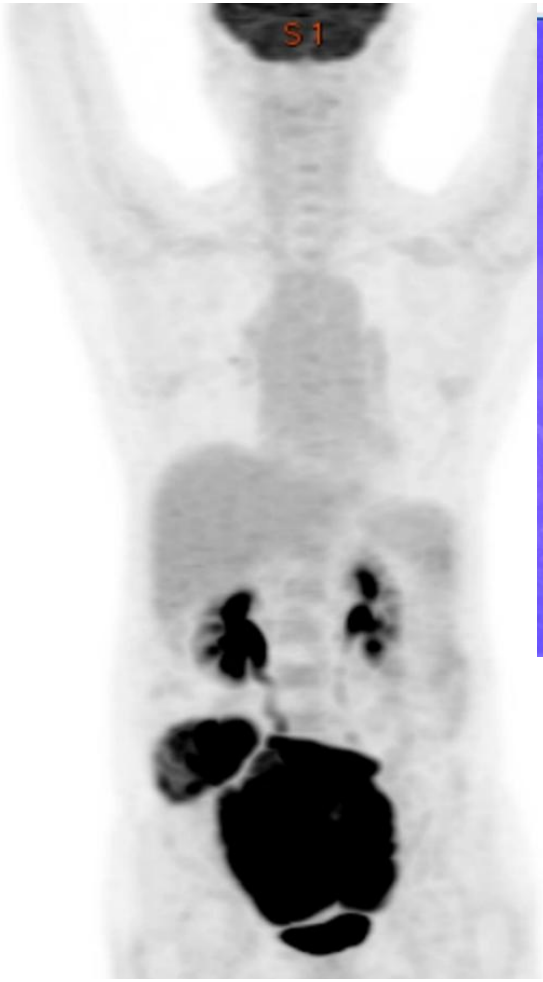
- 71 세 Carcinosarcoma

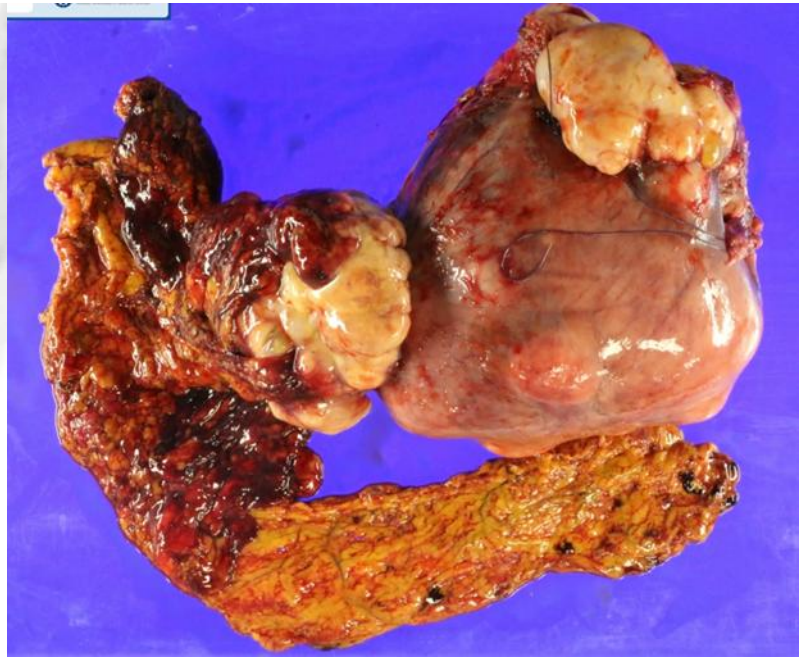
- Carcinosarcom, stage IIIA or IVB (epithelial component serous (30%), mesenchymal component undifferentiated sarcoma (70%), osteosarcoma (1%))

- 2024-12-27 primary debulking (TAH BSO omentectomy PALD BPLD)

- pMMR, PD-L1 (CPS:7, TPS:1%), HER2 (2+), p53 aberrant
- tNGS (TP53, TAT1, FBXW7, PIK3R1, DNMT3A, ERBB3, GLI1, AKT2), MSS (1.59%)

- 2025-1-16 ~ paclitaxel + carboplatin + dostarlimab
- 현재 C12 dostarlimab 1000 mg q 6 weeks 유지 중



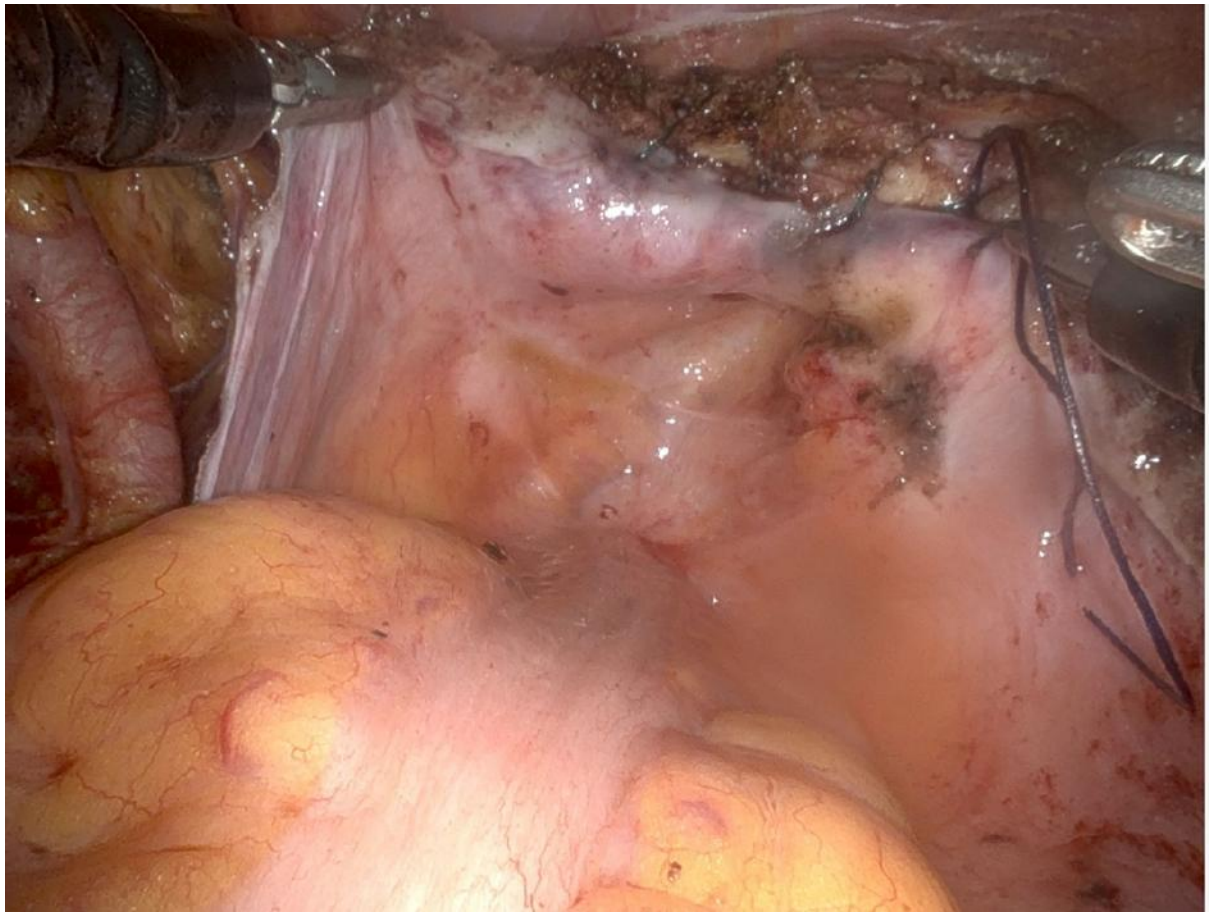


환자 개인별로 약리학적 특성, 부작용 발현 등이 다양할 수 있어 본 케이스는 모든 환자에게 그대로 적용될 수 없으며 scientific discussion 목적으로 공유합니다.

speaker's own slide

Case sharing #2 – MMRp

- 53 YO, 10년 전 유방암 과거력
- Endometrioid G1, stage IIIB2
- 2024-8-30 SP staging (TLH BSO bilateral pelvic sentinel LN biopsy, peritonectomy)
- pMMR, p53 WT
- tNGS (TP53, NFE2L2), MSS (2.36%)
- 2024-9-13 ~ paclitaxel + carboplatin + dostarlimab
- 현재 C15 dostarlimab 1000 mg q 6 weeks 유지 중



환자 개인별로 약리학적 특성, 부작용 발현 등이 다양할 수 있어 본 케이스는 모든 환자에게 그대로 적용될 수 없으며 scientific discussion 목적으로 공유합니다.

speaker's own slide

보건의료전문가용

THANK YOU