# Neoadjuvant and adjuvant systemic therapy of ovarian cancer

**Mi-Kyung Kim**
Ewha Womans University College of Medicine

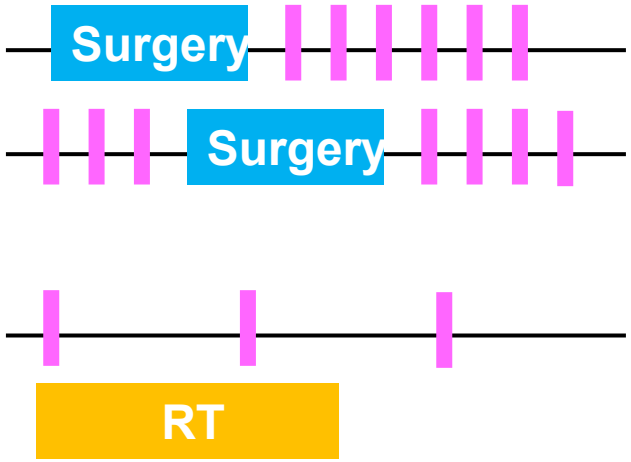
# DECLARATION OF INTERESTS

## Nothing to declare

# Principles of chemotherapy

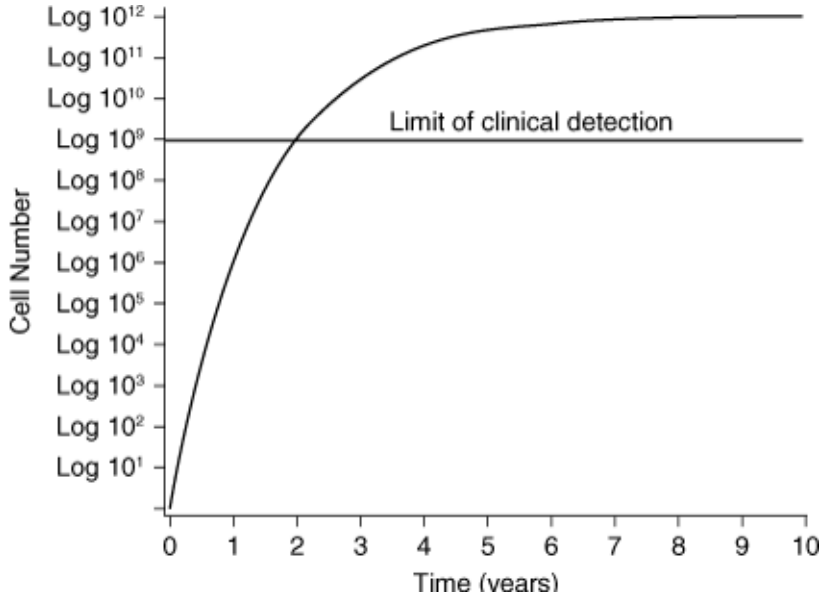
- Surgery (local)
- Radiotherapy (regional)

- Chemotherapy (systemic)
  - Adjuvant chemotherapy
  - Neoadjuvant chemotherapy
  - Palliative/salvage chemotherapy
  - Concurrent chemoradiation



# Principles of chemotherapy

- 가능한 빠른 시기에
  - 암존재량이 적을수록 항암치료의 효과 ↑↑




- 복합항암화학요법
  - 2 -3 가지 약제

  (다른 기전 및 부작용 종류)

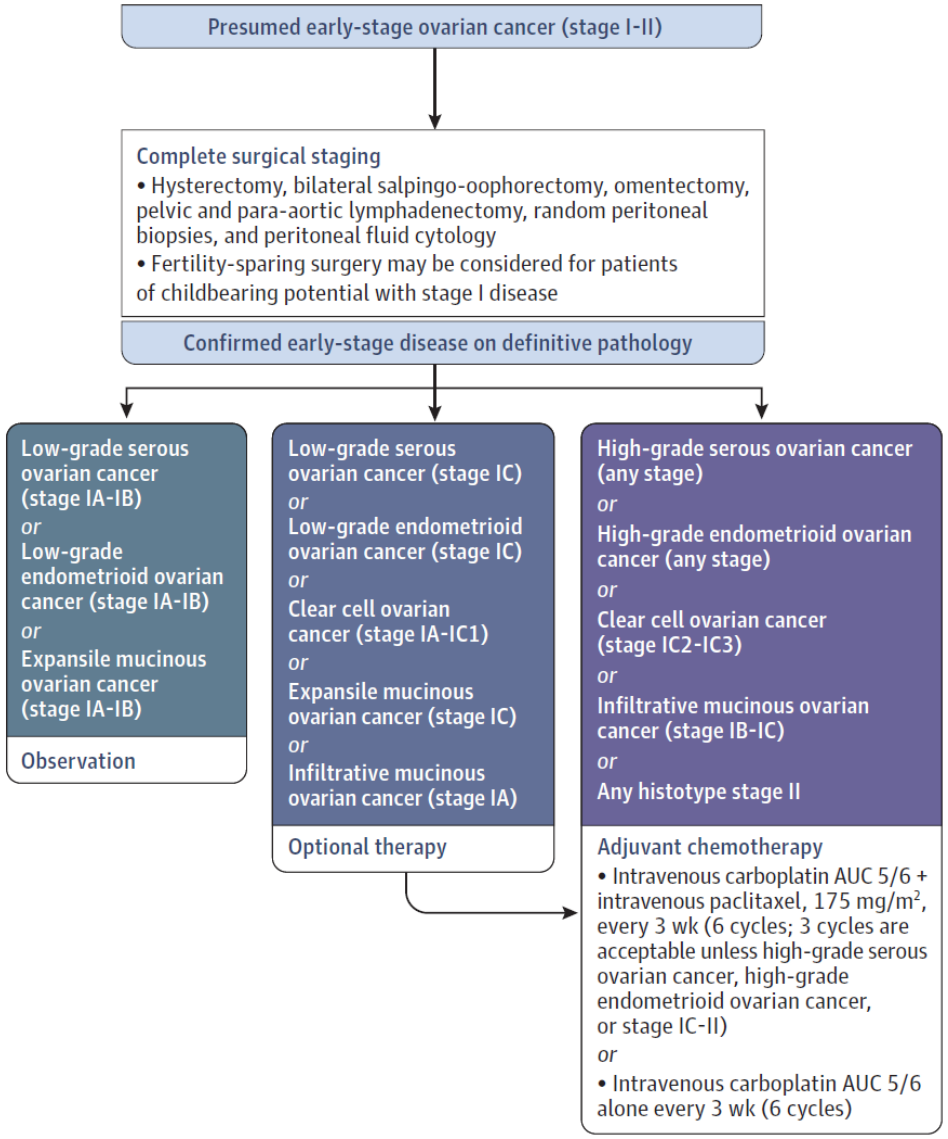
  → 순응도↑, 독성↓, 재발↓

# Principles of chemotherapy

- Administration route
  - **IV: most common**
  - IM: methotrexate
  - PO: etoposide
  - IP (intraperitoneal): cisplatin, paclitaxel
  - IT (intrathecal): methotrexate

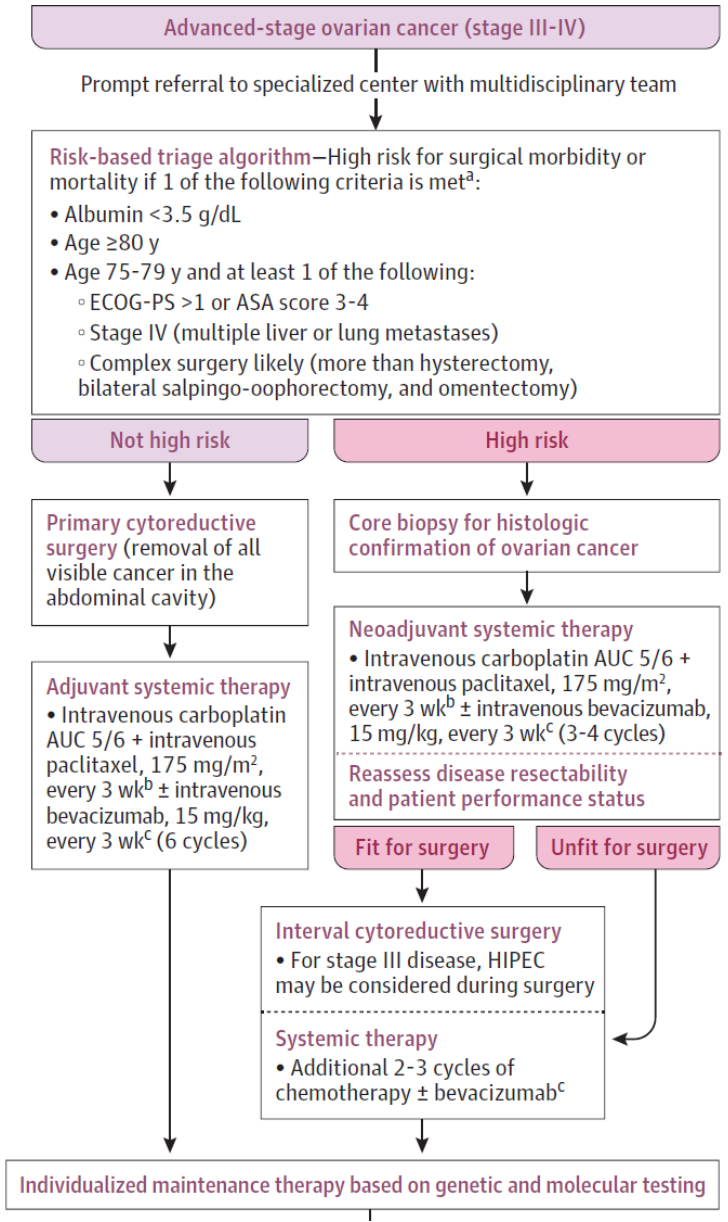
- 투약 간격
  - **3주** / 1주 (weekly regimens)
- 용량
  - **BSA ($m^2$)**
    - DuBois & DuBois formula: BSA=0.007184 x *weight* (kg)$^{0.425}$ x height (cm)$^{0.725}$
    - Mosteller formula: $\sqrt{\frac{weight\ (kg) \times height\ (cm)}{3600}}$

# Primary Treatment for Early-Stage Ovarian Cancer



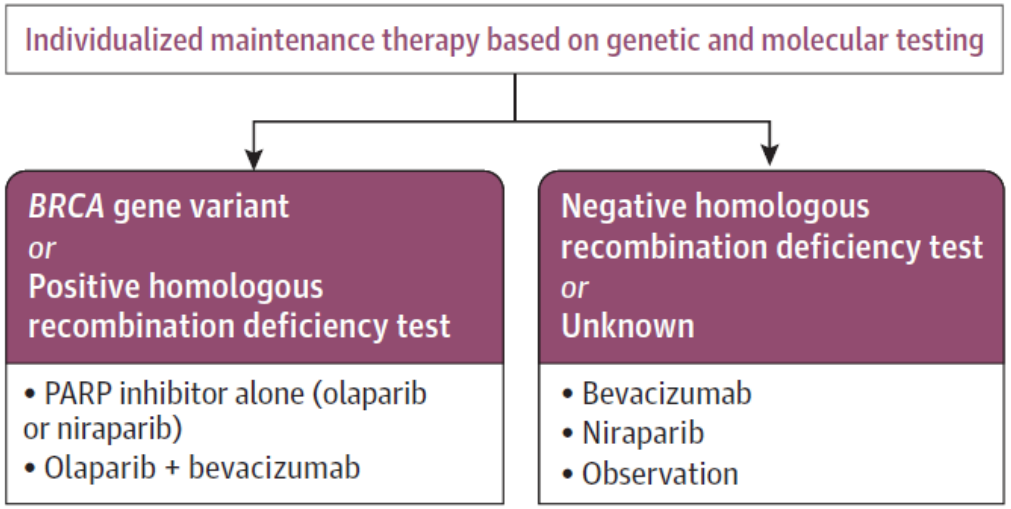

JAMA 2025:334(14);1278-91

# Primary Treatment for Advanced-Stage EOC



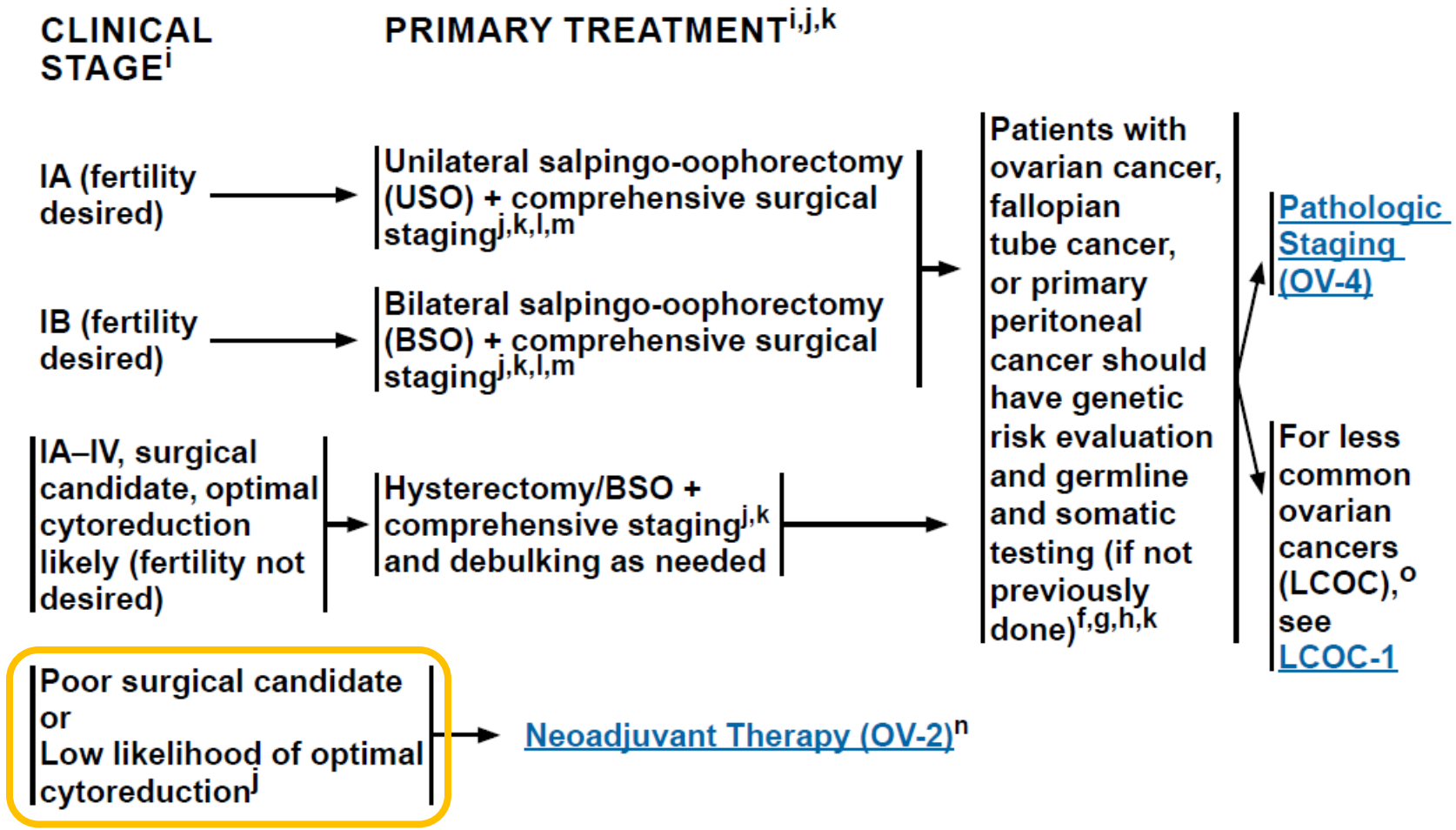

JAMA 2025:334(14);1278-91

# Primary Treatment for Advanced-Stage EOC




JAMA 2025:334(14);1278-91

# Primary Treatment for Ovarian Cancer

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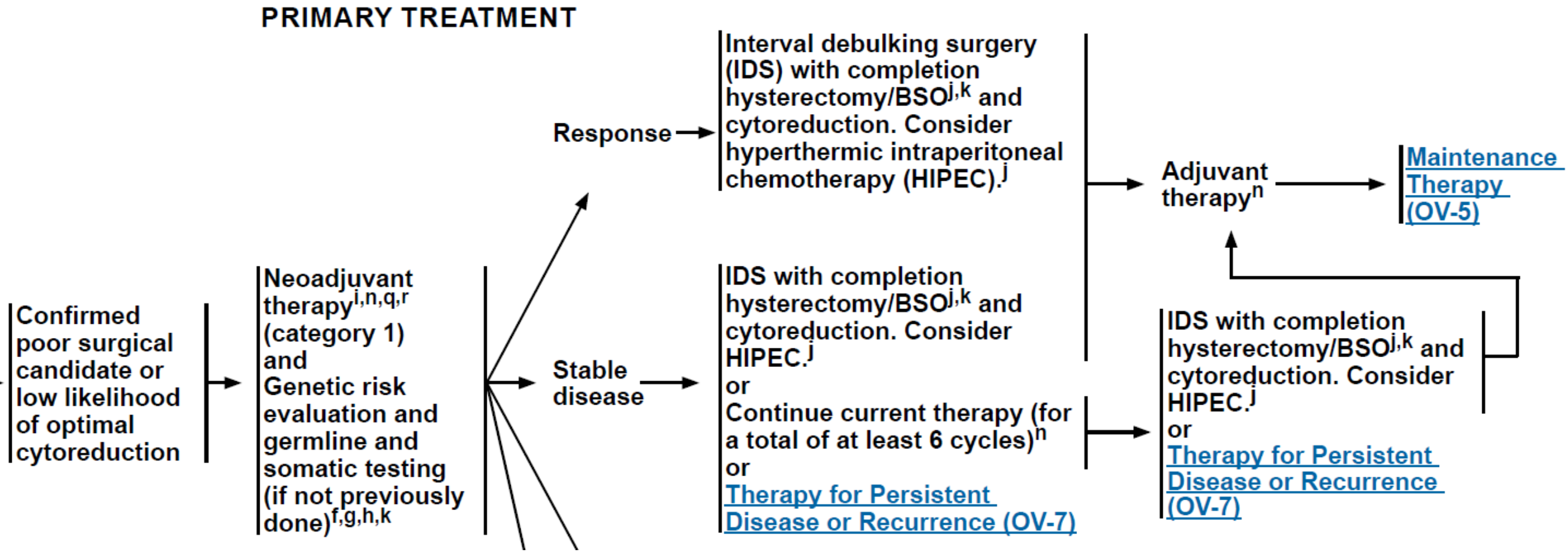
# Primary Treatment for Ovarian Cancer

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# Adjuvant CTx for advanced EOC

- Adjuvant therapy: following cancer surgery, to decrease the risk of disease recurrence or to primarily treat residual disease

- Paclitaxel/Carboplatin q 3wks x 6 cycles
- +/- Bevacizumab (stage IV, >1cm residual ds after surgery)
- Starting within 6 weeks after surgery

# Adjuvant CTx for advanced EOC

- IV Paclitaxel 175 mg/m$^2$ / Carboplatin AUC 5-6 on D1, q 3wks x 6 cycles (preferred)
- Other IV regimens
  - Docetaxel 60-75 mg/m$^2$ / Carboplatin AUC 5-6 on D1, q 3wks x 6 cycles (SCOTROC1)
  - Weekly paclitaxel 80 mg/m$^2$ (D1,8,15) / Carboplatin AUC 5-6 on D1, q 3wks x 6 cycles (JGOG-3016)
  - Weekly paclitaxel 60 mg/m$^2$ / Carboplatin AUC 2 on D1,8,15, q 3wks x 6 cycles (MITO-7, ICON8)
  - Liposomal doxorubicin 30 mg/m$^2$ / Carboplatin AUC 5 on D1, q 4wks x 6 cycles

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# Adjuvant CTx for advanced EOC

2. 수술후보조요법(adjuvant)

| 연번 | 항암요법 | 투여대상 |
|---|---|---|
| 1 | docetaxel + carboplatin<br>(제2007-7호: 2007.11.20, 개정 제2022-190호: 2022.8.1.) | 가. stage IA (Grade 2, 3)<br>나. stage IB (Grade 2, 3)<br>다. stage IC 이상 |
| 2 | docetaxel + cisplatin<br>(제2006-3호: 2006.1.9, 개정 제2007-7호: 2007.11.20., 개정 제2022-190호: 2022.8.1.) | |
| 3 | paclitaxel + cisplatin<br>(제2006-3호: 2006.1.9, 개정 제2007-7호: 2007.11.20., 개정 제2022-190호: 2022.8.1.) | |
| 4 | paclitaxel + carboplatin<br>(제2007-7호: 2007.11.20, 개정 제2015-291호: 2015.12.1, 개정 제2022-190호: 2022.8.1.) | 가. stage IA (Grade 2, 3)<br>나. stage IB (Grade 2, 3)<br>다. stage IC 이상<br>라. Sex Cord-Stromal Tumors |
| 5 | paclitaxel + cisplatin (Intra-peritoneal)<br>(제2006-4호: 2006.5.1, 개정 제2006-6호: 2006.8.1. 개정 제2022-190호: 2022.8.1.) | stage Ⅲ인 환자에서 수술 후 잔류종양이 1㎝ 이하인 경우 |

# Adjuvant CTx for advanced EOC

- Paclitaxel 175 mg/m$^2$ / Carboplatin AUC 5-6
  vs. Docetaxel 60-75 mg/m$^2$ / Carboplatin AUC 5-6

- No significant difference in efficacy (PFS/OS)

- Paclitaxel: more neuropathy, alopecia
- Docetaxel: more GI, peripheral edema, nail change
  → considered for patients at high risk for neuropathy (e.g. diabetes)

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# Adjuvant CTx for advanced EOC

- Number of cycles
  - Stage I : 3 cycles (clear cell, endometrioid, mucinous)
    or 6 cycles for high-grade serous ca (GOG-157)
  - Stage II-IV : 6 cycles vs. >6 cycles
    - no evidence of additional clinical benefit of treatment beyond 6 cycles, increased neurotoxicity

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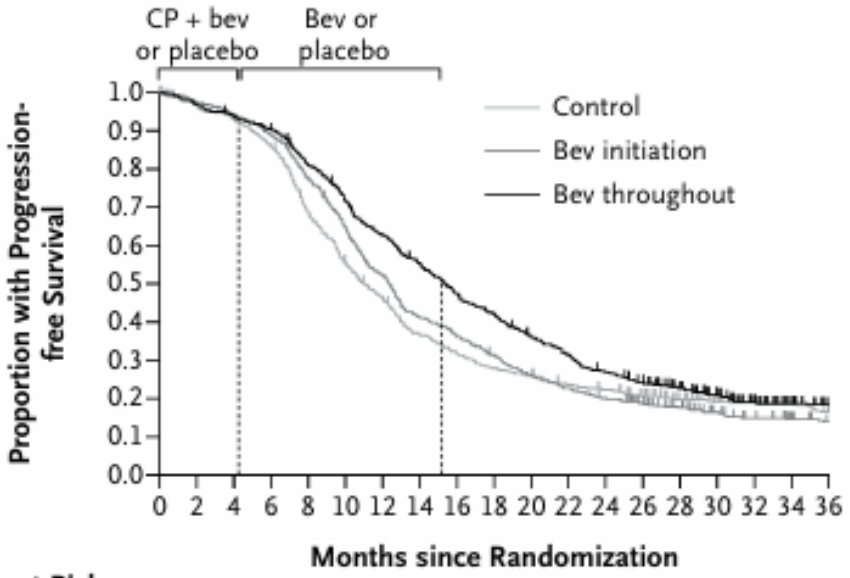
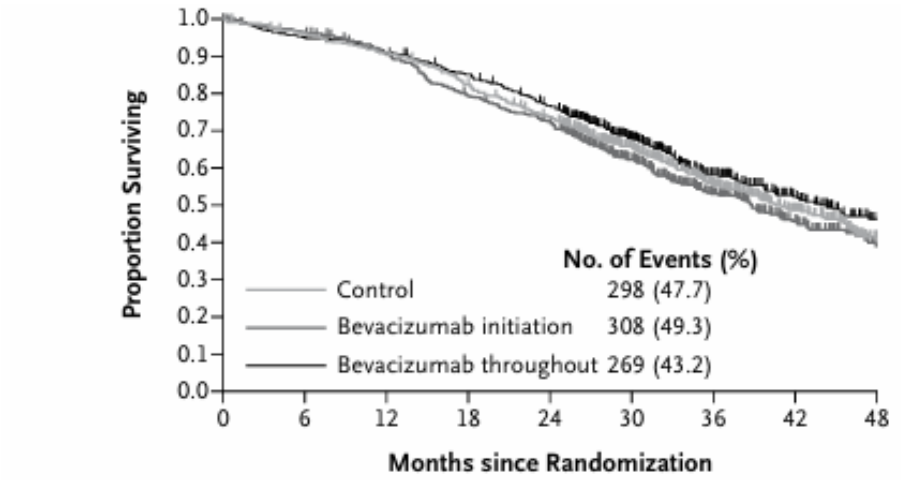
# Adjuvant CTx for advanced EOC

- Addition of bevacizumab (GOG-218, ICON7)
- Paclitaxel/Carboplatin/Bevacizumab → Bevacizumab maintenance




| No. at Risk | | | | | | | |
|---|---|---|---|---|---|---|---|
| Control | 625 | 535 | 283 | 169 | 133 | 78 | 49 |
| Bev initiation | 625 | 552 | 319 | 190 | 121 | 67 | 40 |
| Bev through-out | 623 | 559 | 386 | 256 | 162 | 97 | 56 |




| No. at Risk | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Control | 625 | 595 | 558 | 506 | 446 | 322 | 200 | 116 | 56 |
| Bevacizumab initiation | 625 | 598 | 557 | 486 | 440 | 304 | 191 | 108 | 54 |
| Bevacizumab throughout | 623 | 587 | 561 | 519 | 463 | 321 | 201 | 114 | 62 |

N Eng J Med 2011;365:2473-83.

# Adjuvant CTx for advanced EOC

- Addition of bevacizumab (GOG-218, ICON7)

| Trial | Patients | First-line CTx → Maintenance | FU (mo) | PFS (median, mo) HR [95% CI], p-value | OS (median, mo) HR [95% CI], p-value |
|---|---|---|---|---|---|
| GOG-218 | Stage III incompletely resected or stage IV 85% serous | Arm 1: carbo/pac/placebo → placebo | 19.4 | 10.3 | 39.3 |
| | | Arm 2: carbo/pac/bev → placebo | | 11.2<br>0.908 [0.795-1.040], *P*=.16 | 38.7<br>1.036 [0.827-1.297], *P*=.76 |
| | | Arm 3: carbo/pac/bev → bev | | 14.1<br>0.717 [0.625-0.824], *P*<.001 | 39.7<br>0.915 [0.727-1.152], *P*=.45 |
| ICON7 | Stage I-IIA high-risk or IIB-IV 69% serous | Arm 1: carbo/pac → none | 48.6 | 17.5 | 58.6 |
| | | Arm 2: carbo/pac/bev → bev | 48.8 | 19.9<br>0.93 [0.83-1.05], *P*=.25 | 58.0<br>0.99 [0.85-1.14], *P*=.25 |

* Greater benefit for patients with poor prognosis
  : inoperable stage III, suboptimally debulked (residual >1cm), stage IV

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# Adjuvant CTx for advanced EOC

- Addition of bevacizumab (GOG-218, ICON7)

| Trial | Treatments |
|---|---|
| GOG-218 | Paclitaxel 175 mg/m$^2$ IV + Carboplatin AUC 6 IV, q 3wks x cycles 1-6<br>+ bevacizumab 15 mg/kg q 3wks x cycles 2-6<br>→ maintenance bevacizumab 15 mg/kg q 3wks x cycles 7-22 |
| ICON7 | Paclitaxel 175 mg/m$^2$ IV + Carboplatin AUC 5-6 IV, q 3wks x 6 cycles<br>+ bevacizumab 7.5 mg/kg q 3wks x cycles 5-6 (omitted cycle 1 if <4 wks from surgery)<br>→ maintenance bevacizumab 7.5 mg/kg q 3wks x 12 cycles |

| 연번 | 항암요법 | 투여대상 | 투여단계 |
|---|---|---|---|
| | bevacizumab<br>+ paclitaxel + carboplatin | 가. FIGO stage IIIb, IIIc 환자중 suboptimally debulked(잔존종양크기>1cm)이거나 stage IV 상피성 난소암, 난관암 또는 원발성 복막암<br>1) bevacizumab은 7.5mg/kg로 투여하며, 화학요법 제2주기에서 제6주기까지 bevacizumab을 병용 투여하고, 이후 단독투여하며 최대 18주기까지 급여인정함. (단, 질병진행시 투여중단)<br>2) 허가사항 범위 내에서 상기에 해당 하지 않는 front-line 요법의 경우 'bevacizumab'은 약값 전액을 본인이 부담토록 함 | 1차 |

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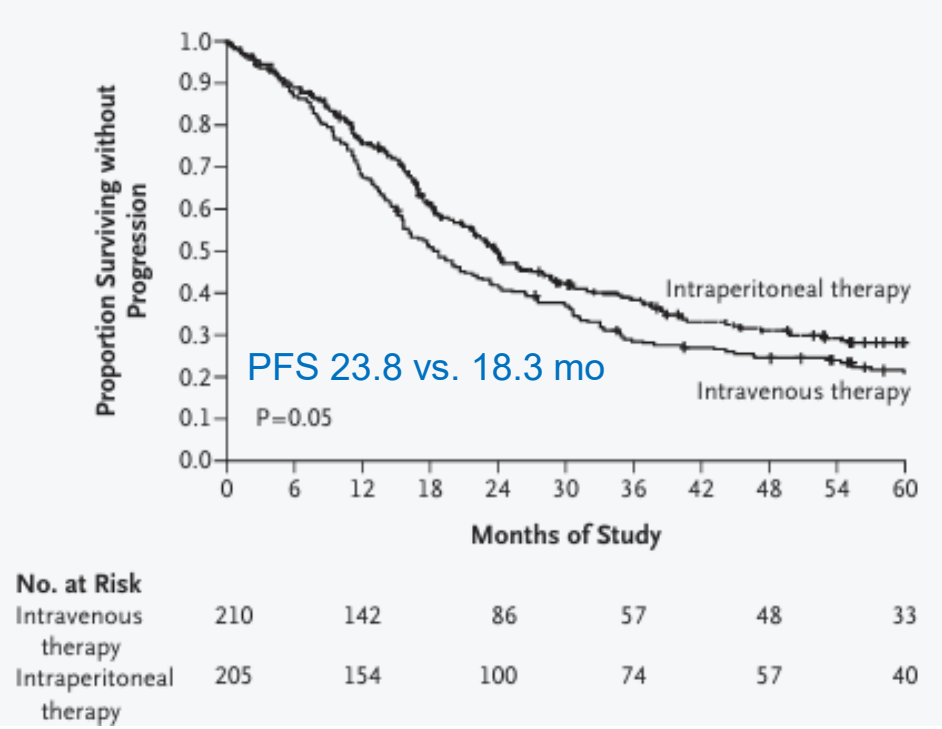
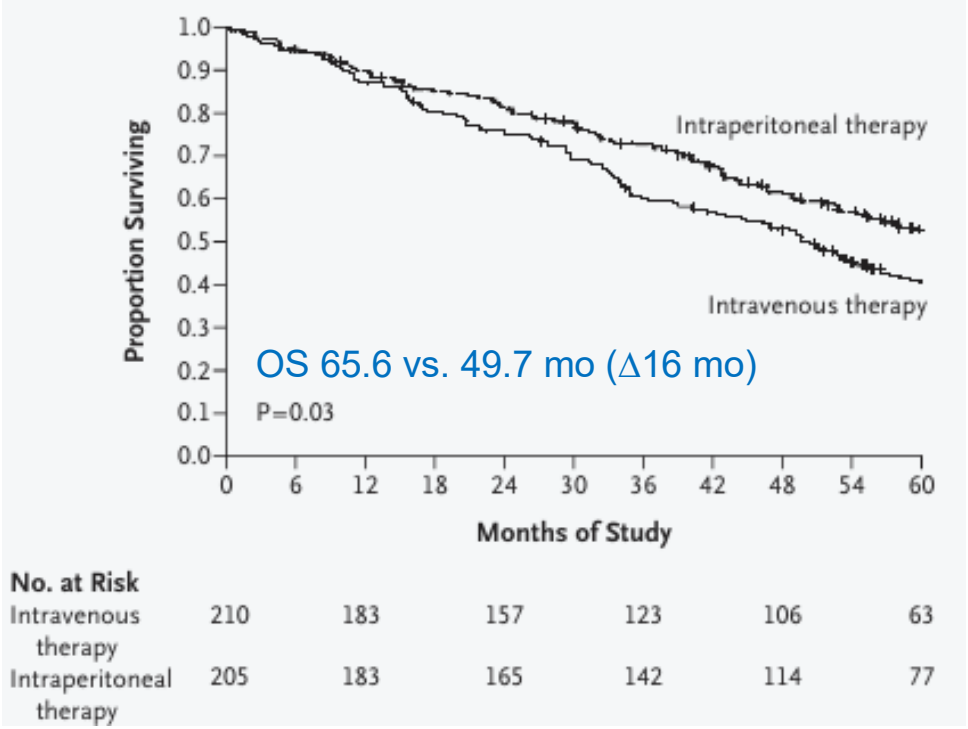
# Adjuvant CTx for advanced EOC

- S/E of bevacizumab
  - Bleeding, hypertension, thromboembolic events
  - Proteinuria
  - GI perforation
  - Wound healing complications

# Adjuvant CTx for advanced EOC

- IP/IV chemotherapy (GOG-172)




N Eng J Med 2006;354:34-43.

# Adjuvant CTx for advanced EOC

- IP/IV chemotherapy

| Trial | Patients | Regimen | PFS (median, mo) | OS (median, mo) |
|---|---|---|---|---|
| GOG-172 | Stage III residual ds ≤1 cm | IP/IV<br>Paclitaxel 135 mg/m$^2$ IV D1<br>+ cisplatin 100 mg/m$^2$ IP D2<br>+ paclitaxel 60 mg/m$^2$ IP D8, q 3wks x 6 cycles | 23.8 | 65.6 |
| | | IV<br>Paclitaxel 135 mg/m$^2$ IV D1<br>+ cisplatin 75 mg/m$^2$ IV D2, q 3wks x 6 cycles | 18.3 | 49.7 |
| GOG-252 | Stage III/IV | IV/IP pac/carbo/bev<br>Paclitaxel 80 mg/m$^2$ IV D1,8,15<br>+ carboplatin AUC 6 IP D1, q 3wks x 6 cycles<br>Bevacizumab 15 mg/kg IV q 3wks cycles 2-22 | 27.4 | 78.9 |
| | | IV/IP pac/cis/bev<br>Paclitaxel 135 mg/m$^2$ IV D1<br>+ cisplatin 75 mg/m$^2$ IP D2<br>+ paclitaxel 60 mg/m$^2$ IP D8, q 3wks x 6 cycles<br>Bevacizumab 15 mg/kg IV q 3wks cycles 2-22 | 26.2 | 72.9 |
| | | IV pac/carbo/bev<br>Paclitaxel 80 mg/m$^2$ IV D1,8,15<br>+ carboplatin AUC 6 IV D1, q 3wks x 6 cycles<br>Bevacizumab 15 mg/kg IV q 3wks cycles 2-22 | 24.9 | 75.5 |

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# Adjuvant CTx for advanced EOC

- IP chemotherapy
  - Stage III, optimally debulked (residual <1 cm) patients
  - Not recommended for stage I and IV
  - S/E: catheter complications, abdominal pain, (cisplatin-renal toxicity, neuropathy)

  - IP chemotherapy does not further improve outcomes on PFS benefit of adding bevacizumab (GOG-252)



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# Primary Treatment for Ovarian Cancer

## Primary Systemic Therapy Regimens[c] - Epithelial Ovarian/Fallopian Tube/Primary Peritoneal

| Primary Therapy for Stage I Disease | | | |
|---|---|---|---|
| • High-grade serous<br>• Endometrioid (grade 2/3)<br>• Clear cell carcinoma[d]<br>• Carcinosarcoma[d] | **Preferred Regimens**<br>• Paclitaxel/carboplatin every 3 weeks[g,h] | **Other Recommended Regimens**<br>• Carboplatin/liposomal doxorubicin<br>• Docetaxel/carboplatin | **Useful in Certain Circumstances**<br>• Paclitaxel/cisplatin<br>For carcinosarcoma:<br>• Carboplatin/ifosfamide<br>• Cisplatin/ifosfamide<br>• Paclitaxel/ifosfamide (category 2B)[g] |
| **Mucinous carcinoma (stage IA, IB, and IC, grades 1–3)[d]** | **Preferred Regimens**<br>• 5-FU/leucovorin/oxaliplatin<br>• Capecitabine/oxaliplatin<br>• Paclitaxel/carboplatin every 3 weeks[g,h] | **Other Recommended Regimens**<br>• Carboplatin/liposomal doxorubicin<br>• Docetaxel/carboplatin | **Useful in Certain Circumstances**<br>• Paclitaxel/cisplatin |
| **Low-grade serous (stage IC)/Grade I endometrioid (stage IC)[d,e,f]** | **Preferred Regimens**<br>• Paclitaxel/carboplatin every 3 weeks[g,h] ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Hormone therapy (aromatase inhibitors: anastrozole, letrozole, exemestane) (category 2B) | **Other Recommended Regimens**<br>• Carboplatin/liposomal doxorubicin ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Docetaxel/carboplatin ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Hormone therapy (leuprolide acetate, goserelin acetate, tamoxifen,[j] fulvestrant) (category 2B) | **Useful in Certain Circumstances**<br>• Paclitaxel/cisplatin |

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## Primary Therapy for Stage II–IV Disease (Principles of Maintenance PARPi Therapy on OV-C, 3 of 12)

| | Preferred Regimens | Other Recommended Regimens | Useful in Certain Circumstances |
|---|---|---|---|
| • High-grade serous<br>• Endometrioid (grade 2/3)<br>• Clear cell carcinoma[d]<br>• Carcinosarcoma[d] | • Paclitaxel/carboplatin every 3 weeks[g,h]<br>• Paclitaxel/carboplatin/bevacizumab + maintenance bevacizumab[g] (ICON-7 & GOG-218) | • Paclitaxel weekly/carboplatin weekly[g,h,k]<br>• Docetaxel/carboplatin<br>• Carboplatin/liposomal doxorubicin<br>• Paclitaxel weekly/carboplatin every 3 weeks[g]<br>• Docetaxel/carboplatin/bevacizumab + maintenance bevacizumab (GOG-218) | • Paclitaxel/cisplatin<br>• Docetaxel/oxaliplatin/bevacizumab + maintenance bevacizumab<br>• IV/IP paclitaxel/carboplatin<br>• IV/IP paclitaxel/cisplatin (for optimally debulked stage II–III disease)<br>• For carcinosarcoma:<br>▸ Carboplatin/ifosfamide<br>▸ Cisplatin/ifosfamide<br>▸ Paclitaxel/ifosfamide (category 2B)[g] |
| **Mucinous carcinoma[d]** | • 5-FU/leucovorin/oxaliplatin ± bevacizumab (category 2B for bevacizumab)<br>• Capecitabine/oxaliplatin ± bevacizumab (category 2B for bevacizumab)<br>• Paclitaxel/carboplatin every 3 weeks[g,h]<br>• Paclitaxel/carboplatin/bevacizumab + maintenance bevacizumab[g] (ICON-7 & GOG-218) | • Paclitaxel weekly/carboplatin weekly[g,h,k]<br>• Docetaxel/carboplatin<br>• Carboplatin/liposomal doxorubicin<br>• Paclitaxel weekly/carboplatin every 3 weeks[g]<br>• Docetaxel/carboplatin/bevacizumab + maintenance bevacizumab (GOG-218) | • Paclitaxel/cisplatin<br>• Docetaxel/oxaliplatin/bevacizumab + maintenance bevacizumab |
| **Low-grade serous/Grade I endometrioid[d,e,f]** | • Paclitaxel/carboplatin every 3 weeks[g,h] ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Paclitaxel/carboplatin/bevacizumab + maintenance bevacizumab[g] (ICON-7 & GOG-218)<br>• Hormone therapy (aromatase inhibitors: anastrozole, letrozole, exemestane) (category 2B) | • Paclitaxel weekly/carboplatin weekly[g,h,k]<br>• Docetaxel/carboplatin ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Carboplatin/liposomal doxorubicin ± maintenance letrozole (category 2B[f]) or other hormonal therapy (category 2B)[i]<br>• Paclitaxel weekly/carboplatin every 3 weeks[g]<br>• Docetaxel/carboplatin/bevacizumab + maintenance bevacizumab (GOG-218)<br>• Hormone therapy (leuprolide acetate, goserelin acetate, tamoxifen,[j] fulvestrant) (category 2B) | • Paclitaxel/cisplatin<br>• Docetaxel/oxaliplatin/bevacizumab + maintenance bevacizumab (category 2B) |

# Neoadjuvant CTx for advanced EOC

- Not good candidates for PDS d/t advanced age, frailty, poor performance status, comorbidities
- Unlikely to be optimally cytoreduced

→ **Neoadjuvant CTx (NAC)** to reduce tumor burden before surgery

- increase likelihood of optimal cytoreduction
- may improve condition and reduce perioperative risks

# Neoadjuvant CTx for advanced EOC

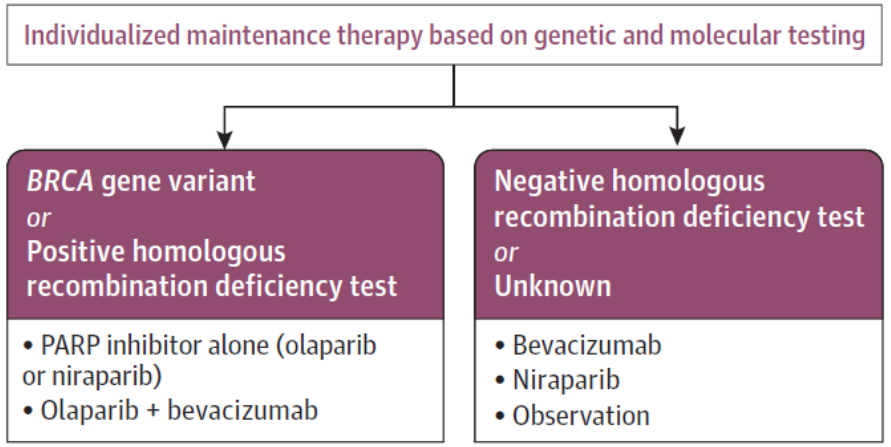
- NAC x 3-4 cycles → IDS → postop CTx x 3-4 cycles (total 6-8 cycles)
  (same chemotherapy regimen for both NAC and postop CTx)
- Paclitaxel/Carboplatin q 3wks x 3~4 cycles
- Biopsy for histologic confirmation before NAC !
  (core biopsy preferred than cytologic diagnosis)

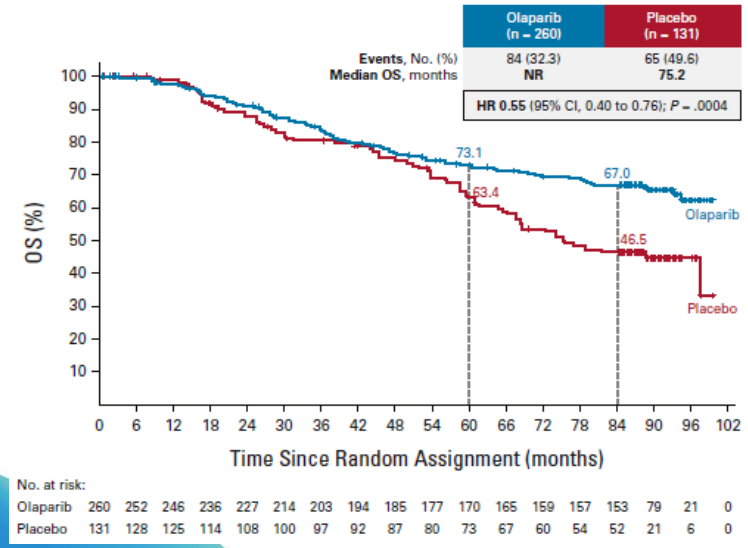
1. 선행화학요법(neoadjuvant)

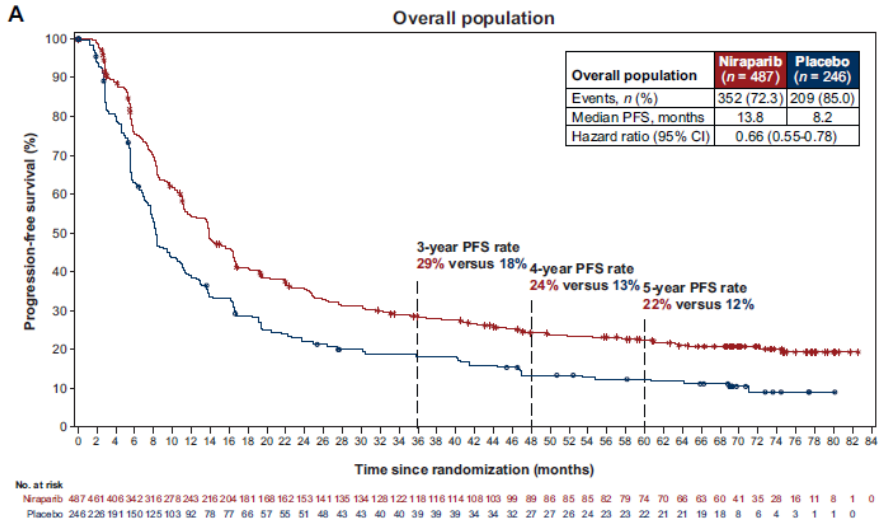
| 연번 | 항암요법 | 투여대상 |
|---|---|---|
| 1 | paclitaxel + carboplatin<br>(제2007-7호: 2007.11.20, 개정 제2015-291호: 2015.12.1, 개정 제2022-190호: 2022.8.1.) | 수술 불가능한 stage IIIc~IV<br>(투여기간: 3주기) |

# Maintenance Tx

- Bevacizumab
  - Paclitaxel/Carboplatin/Bevacizumab → Bevacizumab
- PARPi
  - Olaparib / Olaparib+bevacizumab
  - Niraparib



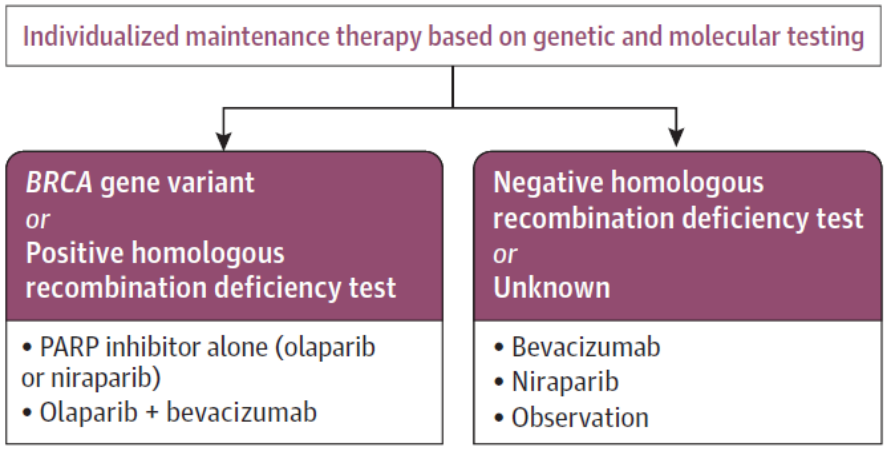




J Clin Oncol 2023;41:609-617.
Ann Oncol 2024;35:981-992.

대한부인종양학회 Korean Society of Gynecologic Oncology

# Maintenance Tx

- PARPi
  - Olaparib / Olaparib+bevacizumab
  - Niraparib




| Drugs | Results | Dosage |
|---|---|---|
| Olaparib (SOLO1) | Median PFS 56 vs. 13.8 mo (HR 0.33) in BRCAmut+ | 300mg bid (2y) |
| Niraparib (PRIMA) | Median PFS 21.9 vs. 10.4 mo (HR 0.43) in HRD+<br>Median PFS 13.8 vs. 8.2 mo (HR 0.62) in overall (HRD+/-) | 200mg qd |
| Olaparib +Bevacizumab (PAOLA-1) | Median PFS 37.2 vs. 17.7 mo (HR 0.33) in HRD+ | 300mg bid (2y)<br>+15mg/kg (15m) |

# Maintenance Tx

4. 유지요법(maintenance)

| 연번 | 항암요법 | 투여대상 | 투여단계 |
|---|---|---|---|
| 1 | niraparib[주1]<br>(제2019-331호: 2019.12.1,<br>개정 제2021-26호: 2021.2.1,<br>개정 제2021-242호: 2021.10.1,<br>개정 제2022-190호: 2022.8.1.<br>개정 제2024-219호: 2024.10.1.) | 가. 1차 백금기반요법에 반응(CR 또는 PR)한 진행성 상동재조합결핍 양성(BRCA 변이 또는 유전체 불안정성) 상피성 난소암, 난관암, 일차 복막암<br>※ 백금계 항암제 완료 후 12주 이내 투여<br><br>나. 2차 이상의 백금기반요법에 반응(CR 또는 PR)한 백금민감성 재발성 BRCA 변이 고도 장액성 난소암, 난관암, 일차 복막암<br>※ 백금계 항암제 완료 후 8주 이내 투여 | - |
| 2 | olaparib(tablet)[주2]<br>(제2021-242호: 2021.10.1,<br>개정 제2022-190호: 2022.8.1.) | 가. 1차 백금기반요법에 반응(CR 또는 PR)한 진행성 BRCA 변이 고도 상피성 난소암, 난관암, 일차 복막암<br>※ 백금계 항암제 완료 후 8주 이내 투여<br>※ 투여기간: 최초 투여 후 2년까지 급여 인정<br><br>나. 2차 이상의 백금기반요법에 반응(CR 또는 PR)한 백금민감성 재발성 BRCA 변이 고도 상피성 난소암, 난관암, 일차 복막암<br>※ 백금계 항암제 완료 후 8주 이내 투여 | - |

주1. 유지요법 시행 직전 투여된 백금기반요법은 bevacizumab 포함 요법을 제외하며, 이전에 PARP 억제제를 투여받은 적이 없어야 함

주2. 유지요법 시행 직전 투여된 백금기반요법(bevacizumab 포함 요법 제외)은 최소 4주기 이상 투여해야 하며, 이전에 PARP 억제제를 투여받은 적이 없어야 함

# Paclitaxel

- Dose: 135(24h)-175(3h) mg/m$^2$ ; weekly 60-80 mg/m$^2$
- 3-weekly regimen: infusion over 3 hours
- Weekly regimen: infusion over 1 hour
- Should be administered before platinum (carboplatin/cisplatin) !!

- Hypersensitivity reactions
- Neuropathy : ~60%, dose-dependent
- Myalgia, arthralgia

# Paclitaxel

– Hypersensitivity reactions

: ~20-40%, usually within 2-5 minutes of infusion

/ urticaria, flush, chest tightness, dyspnea, hypotension

- Premedications : three-drug prophylactic regimen

: Dexamethasone 20 mg IV 30 mins before paclitaxel

(alternative: 20 mg PO/IV at 12 and 6 hrs before paclitaxel)

+ Diphenhydramine 50 mg IV (Chlorpheniramine 1 amp), 30 mins before paclitaxel

+ Famotidine 20 mg IV, 30 mins before paclitaxel

– Management

- Discontinue the infusion
- Antihistamine + hydrocortisone 100 mg IV
- If symptom subsides, restart with slower infusion rate
- prn) Desensitization protocol (알레르기내과 consult)

# Docetaxel

- Dose: 60-75 mg/m$^2$
- Infusion over 1 hour
- Administered before platinum

- Fluid retention (edema, pleural effusion..; ~60%)
  ↔ dexamethasone 8 mg bid 3-5 days, starting 1 day before docetaxel

- Hypersensitivity reaction

# Carboplatin

- Nephrotoxicity
  ↔ Dosing with Calvert formula
  (desired AUC x (25 + GFR))

- Myelosuppression

- Monitoring parameters
  : CBC, renal function test (CCr: Cockcroft formula), LFT

*CCr (female) = ((140-age) x Bwt (kg) / (72 x SCr)) x 0.85

## 2. Platinum

1) Desensitization protocols (Brigham and Women's Hospital, 2010)

- Platinum 제제는 rechallenge시 50%이상에서 severe reactions을 일으킬 수 있으므로, resuscitation drugs (epinephrine, antihistamines, bronchodilators, steroids) 준비 후 시작
- Allergy 내과에 consult 후 시행

• Solution preparation (carboplatin 500 mg 기준)

| | Volume (NS) | Concentration | Total mg of drug |
|---|---|---|---|
| Solution 1 | 250 mL | 0.02 mg/mL | 5 |
| Solution 2 | 250 mL | 0.2 mg/mL | 50 |
| Solution 3 | 250 mL | 1.772 mg/mL | 496.065 |

• Protocol for administration (carboplatin 500 mg 기준)

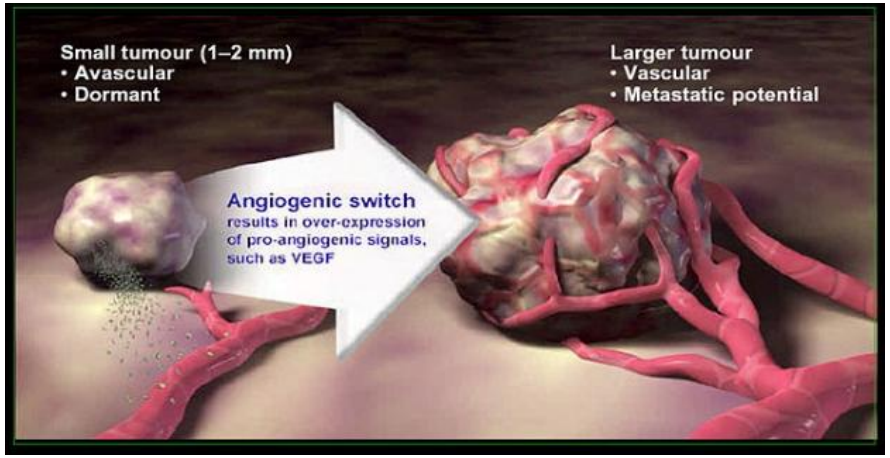
| Step | Solution | Rate (mL/h) | Time (mins) | Volume infused (mL) | Administered dose (mg) |
|---|---|---|---|---|---|
| 1 | 1 | 2 | 15 | 0.5 | 0.01 |
| 2 | 1 | 5 | 15 | 1.25 | 0.025 |
| 3 | 1 | 10 | 15 | 2.5 | 0.05 |
| 4 | 1 | 20 | 15 | 5 | 0.1 |
| 5 | 2 | 5 | 15 | 1.25 | 0.25 |
| 6 | 2 | 10 | 15 | 2.5 | 0.5 |
| 7 | 2 | 20 | 15 | 5 | 1 |
| 8 | 2 | 40 | 15 | 10 | 2 |
| 9 | 3 | 10 | 15 | 2.5 | 4.4292 |
| 10 | 3 | 20 | 15 | 5 | 8.8583 |
| 11 | 3 | 40 | 15 | 10 | 17.7166 |
| 12 | 3 | 75 | 210 | 262.5 | 465.0609 |

**알레르기내과 consult!**

# Bevacizumab

- Mechanisms of action
  : a recombinant humanized monoclonal Ab that blocks angiogenesis by inhibiting VEGF-A

- S/E: hypertension, proteinuria, hemorrhage, VTE,
  interruption of wound healing, GI fistula,
  ischemic/hemorrhagic strokes
- Monitoring: BP check, U/A (prn, 24hr urine collection in Prot 2+ pts)



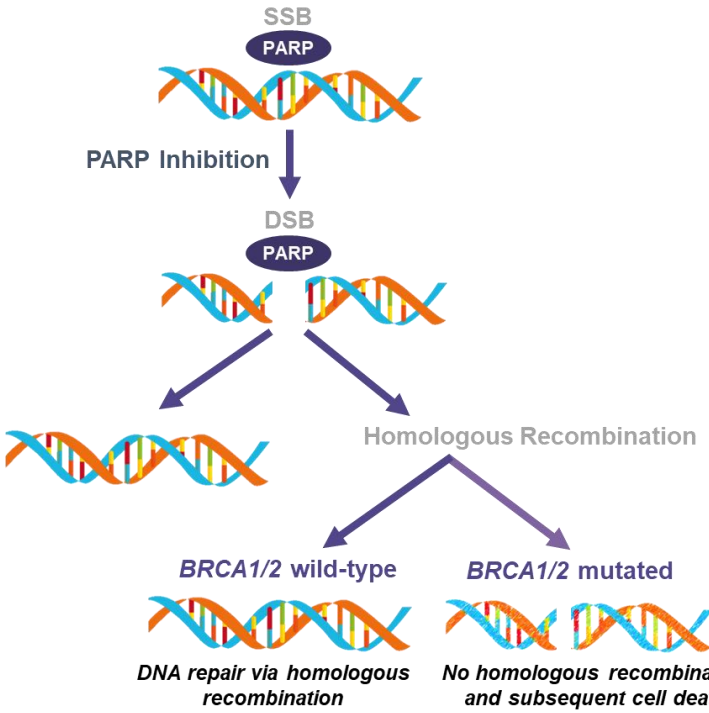
# PARP inhibitors

– Mechanisms of action

: ‘Synthetic lethality’ in BRCA mutated cancers (germline/somatic BRCAm)

– S/E: anemia, neutropenia, thrombocytopenia,
fatigue, N/V, diarrhea, MDS/AML (<1.5%)

– Monitoring: CBC, LFT, BUN/Cr
(Chest PA if pneumonitis sx occurs)



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# 2026년 대한부인종양학회 제7회 동계학술대회 with Chemo-TIP Review

일자 2026년 1월 17일 (토)

장소 세종대학교 컨벤션센터

## Thank you for your attention!

대한부인종양학회
Korean Society of Gynecologic Oncology