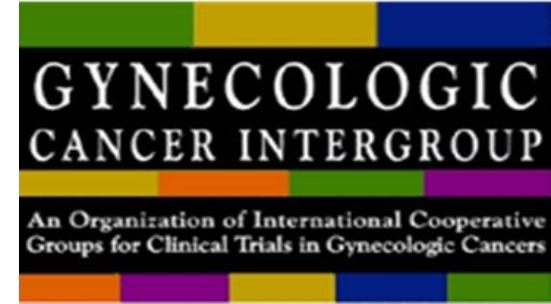




INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY



Cervical Cancer

子宮頸癌

Anuja Jhingran, MD

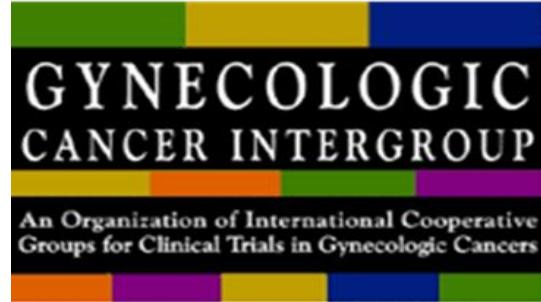
Eriko Aotani Patient-Caregiver Symposium – Kyoto,
Japan -- September 13, 2018



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Incidence of Cervical Cancer

子宮頸癌の発生について



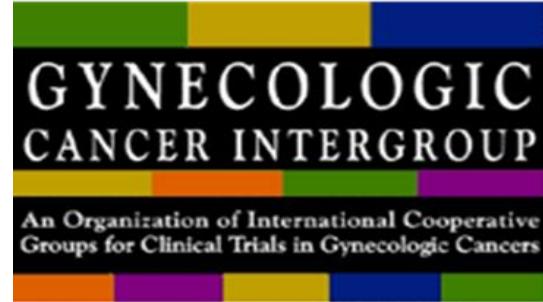
- Global Disease
 - - 世界中でみられる病気である
 - 4th most common cause of death world-wise
 - 266,000 deaths from cervical cancer world wide
 - 世界的には子宮頸癌により26万6千人が死亡し、死因の4番目といわれる



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Incidence of Cervical Cancer

子宮頸癌の発生について



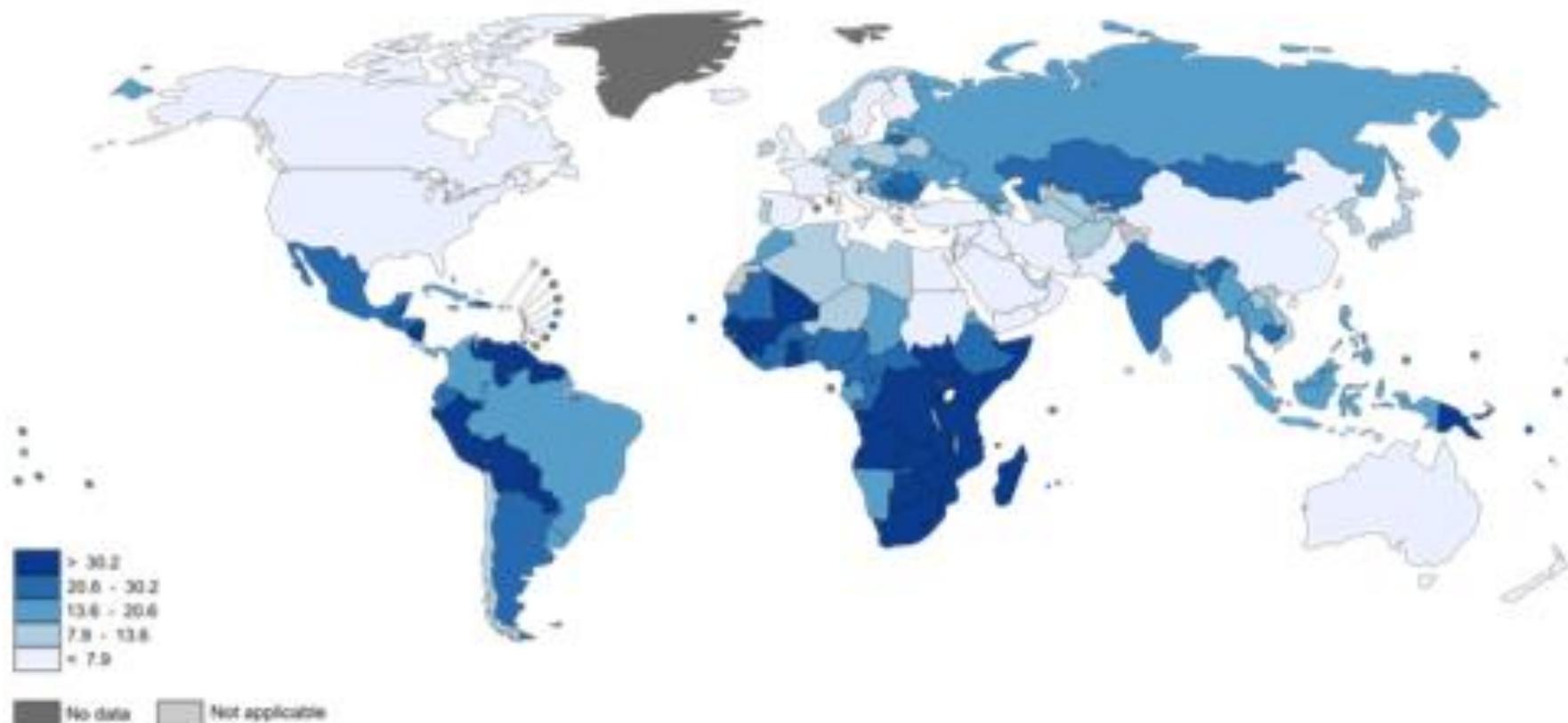
- Disparity among countries

国による相違点

- High Income countries – 11th most common female malignancy and 9th most common cause of death
高所得の国では女性の癌の11位、死因の9位
- Low income countries – 2nd most common cancer and 3rd most common cause of death
低所得の国では癌の2位、死因の3位とされる

Incidence of Cervical Cancer

子宮頸癌の発生について



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: GLOBOCAN 2012.
Map production: iARC
World Health Organization

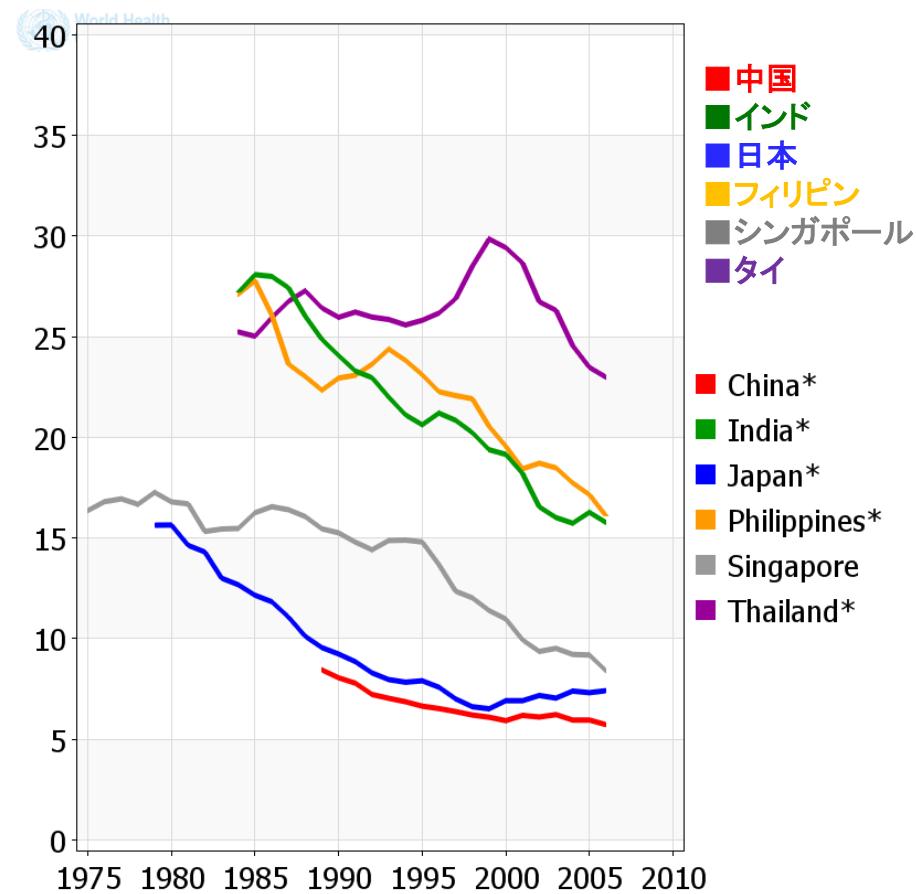
 World Health Organization
© WHO 2015. All rights reserved.

Eriko Aotani Patient-Caregiver Symposium
– Kyoto, Japan -- September 13, 2018

Risk Factors

危険因子

- Risk Factors 危険因子
 - HPV: associated with 99.7% invasive cervical cancer
HPV(ヒトパピローマウイルス)
: 浸潤子宮頸癌の99.7%はHPVと関連している
 - HIV
エイズウイルス
 - Oral Contraceptive pills
経口避妊薬・ピル
 - Smoking
喫煙



- Prevention is **KEY**

子宮頸癌は予防が鍵となる

- HPV vaccines are available and are recommended for boys and girls ages 9-26, or for women older if they are HPV negative.

HPVワクチンは予防になる。

9-26歳の男女ともに推奨され、また
HPVに感染していなければ27歳以上の
女性にも推奨される。



- Two doses – 6-12 months apart are recommended

6-12ヶ月あけて2回の接種が推奨

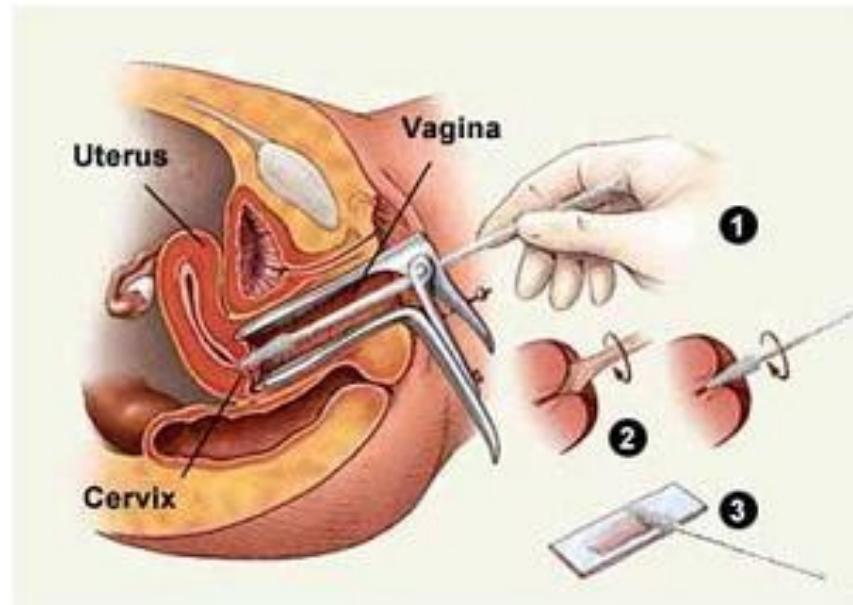
- In countries where at least 50% of females vaccinated – HPV 16/18 ↓ 70%

HPVワクチンが50%以上の女性に接種できた国ではHPV16型・18型が70%↓



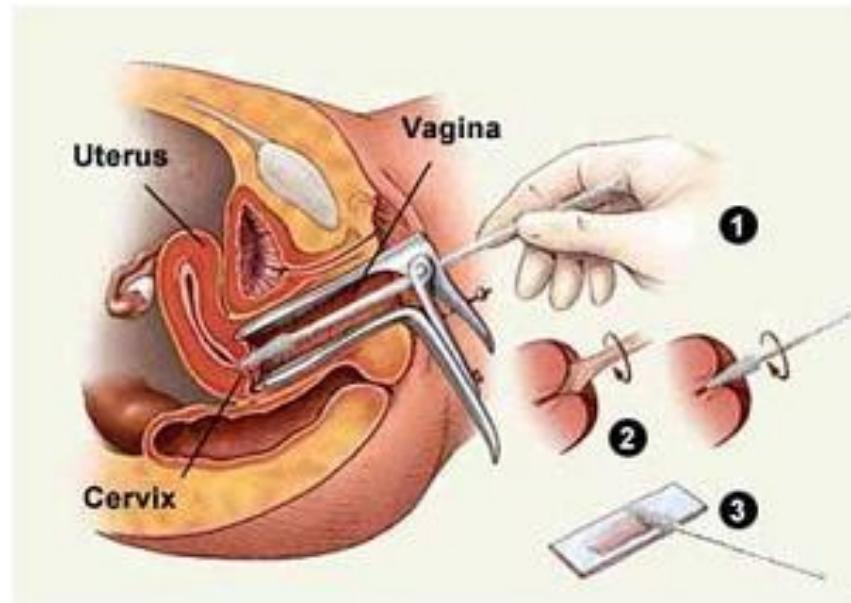
Screening がん検診

- National screening programs have decrease the incidence of cervical cancer in high income countries
- 高所得の国では国を挙げてのがん検診プログラムで子宮頸癌の発生率は減少してきている
- US recommendation – pap smears every 3 years from age of 21-65 yrs.
- アメリカでは21-65歳を対象に3年に1回の子宮頸癌検診が推奨されている



Screening がん検診

- For patients 35-65 yrs. of age
 - if want longer time – pap smear + HPV cytology every 5 years
- 35-65歳でより間隔をあけたい場合には5年毎(HPV検査も行う)
- More frequent for women at higher risk
- 高リスクの女性にはより頻繁に行う



IGCS Clinical Symptoms

INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

子宮頸癌の症状 性交時の痛み・出血

GYNECOLOGIC
CANCER INTERGROUP
An Organization of International Cooperative
Groups for Clinical Trials in Gynecologic Cancers

足のむくみ



閉経後の出血

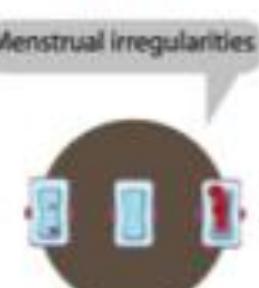
背部痛



CERVICAL CANCER
SYMPTOMS

異常帶下

血便



生理のような出血 性器出血 体重減少



疲れやすさ

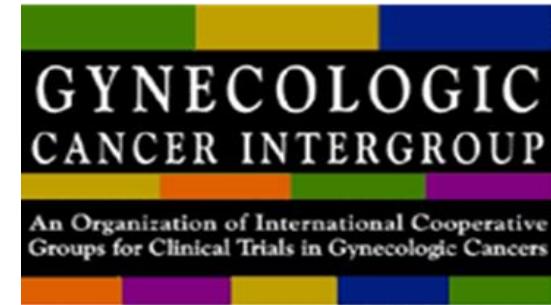
Eriko Aotani Patient-Caregiver Symposium
– Kyoto, Japan -- September 13, 2018

腹痛



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Clinical Symptoms – Early Stage 早期での症状



- Most common symptoms :
- 最も多い症状
 - Abnormal bleeding 不正出血
 - Pain or bleeding after sex 性交後の痛み・出血
 - Abnormal discharge 異常なおりもの

•

Eriko Aotani Patient-Caregiver Symposium
– Kyoto, Japan -- September 13, 2018

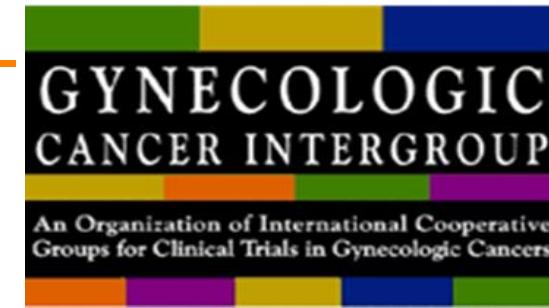


INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Clinical Symptoms – Late Stage

進行したときの症状

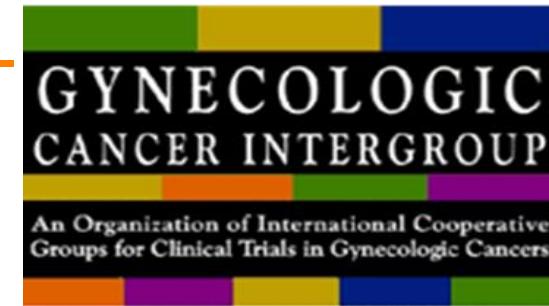
- Combination of lower limb swelling, pain in the back and pain running down the leg – suggest involvement of tissue outside of the cervix
- 足のむくみと、背中の痛み、足に広がる痛みが合わせて見られるときには子宮頸部の外の組織を巻き込んでいる可能性がある





INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Clinical Symptoms – Late Stage



- Passage of urine or stool through the vagina – very advance disease that has involved the rectum or bladder

尿や便が膣からでてくるとき

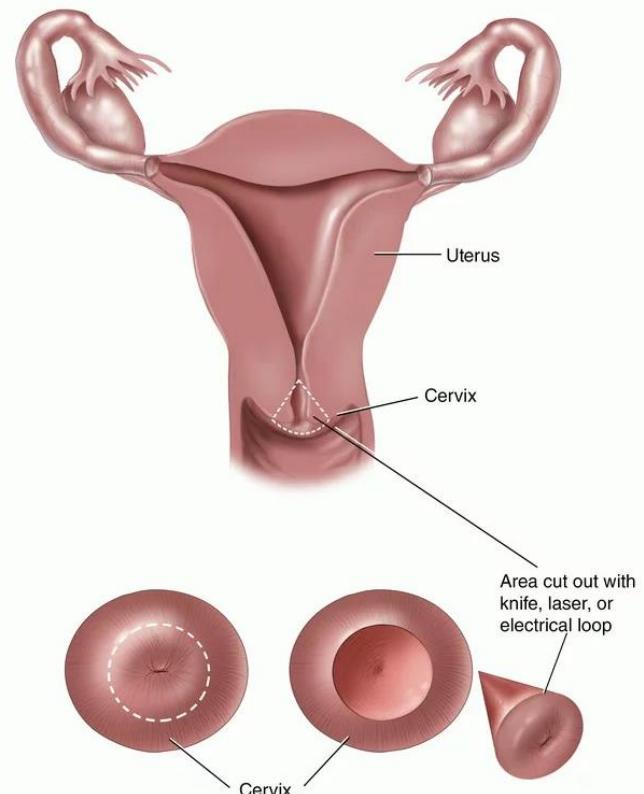
直腸や膀胱まで腫瘍が広がった進行した癌となっている

Diagnosis

診断

- Biopsy or colposcopy is patient is symptomatic but no visible lesion
- 症状があり病変がはっきりしない時は生検やコルポスコピーを行う
- Cone or Leep if biopsy is negative and suspected cancer
- 癌が疑われる場合は円錐切除を行う

Cone Biopsy (Conization) of the Cervix



- Treatment selection 治療方法の選択
 - Sites of possible regional involvement
 - Guide operative procedure 手術
 - Guide external beam planning 外照射
 - Extent of primary disease
 - Selection of local treatment 局所治療
- Assign FIGO Stage 病期の決定
- Predict prognosis 予後の推定

FIGO Staging
病期の決定

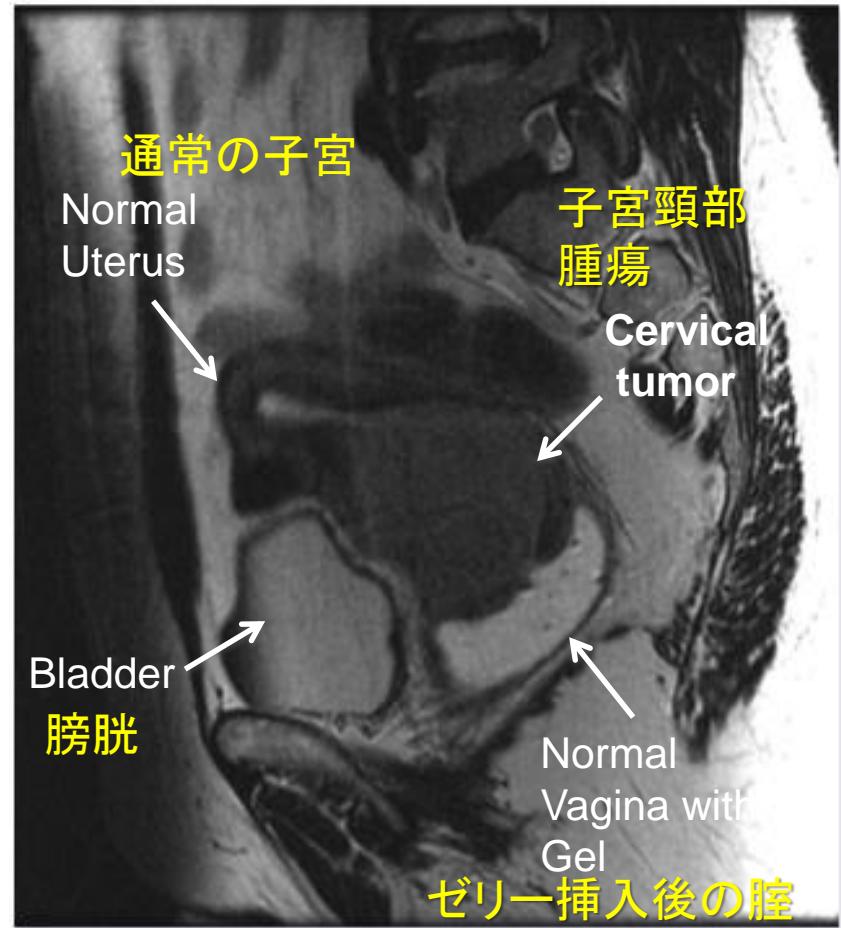
- Clinical – physical exam, Chest x-ray
- 臨床的に- 内診、胸部X線写真
- However: その他
 - PET/CT PET-CT検査
 - MRI MRI検査
 - CT scan CT検査

Staging – MRI

病期-MRI検査

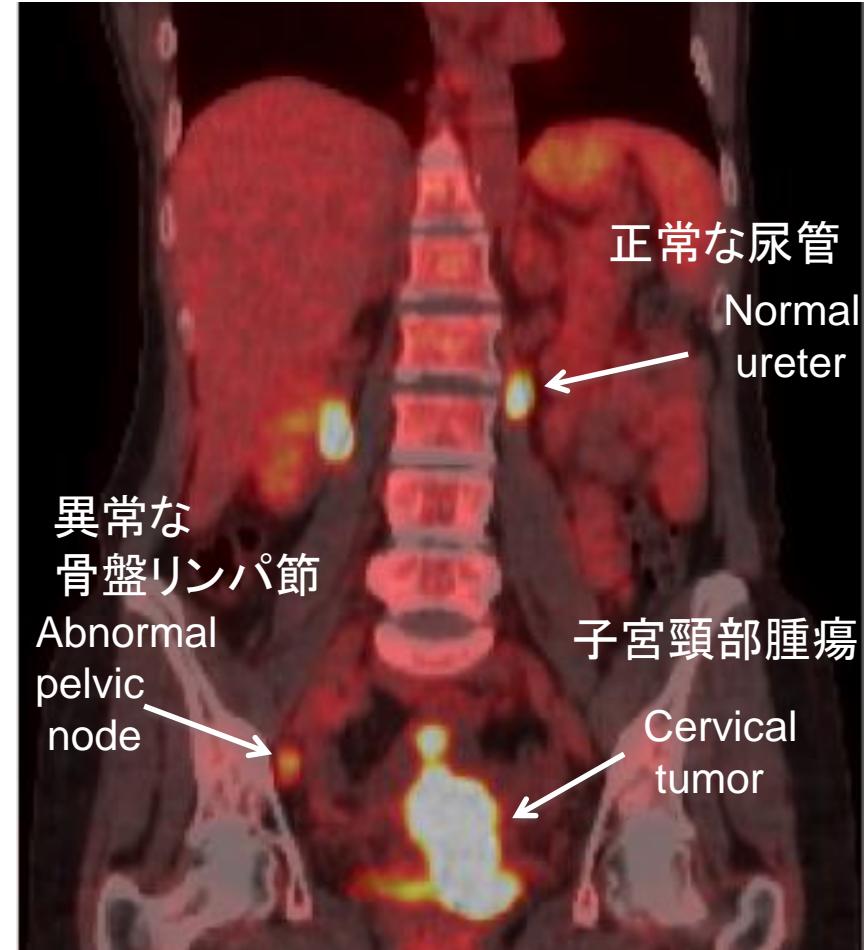
- MRI better for anatomy including identifying the cervical lesion and also involvement of disease outside the cervix and involvement of the uterus

MRIは子宮頸部自体、周囲臓器との関係を評価するのに役立つ



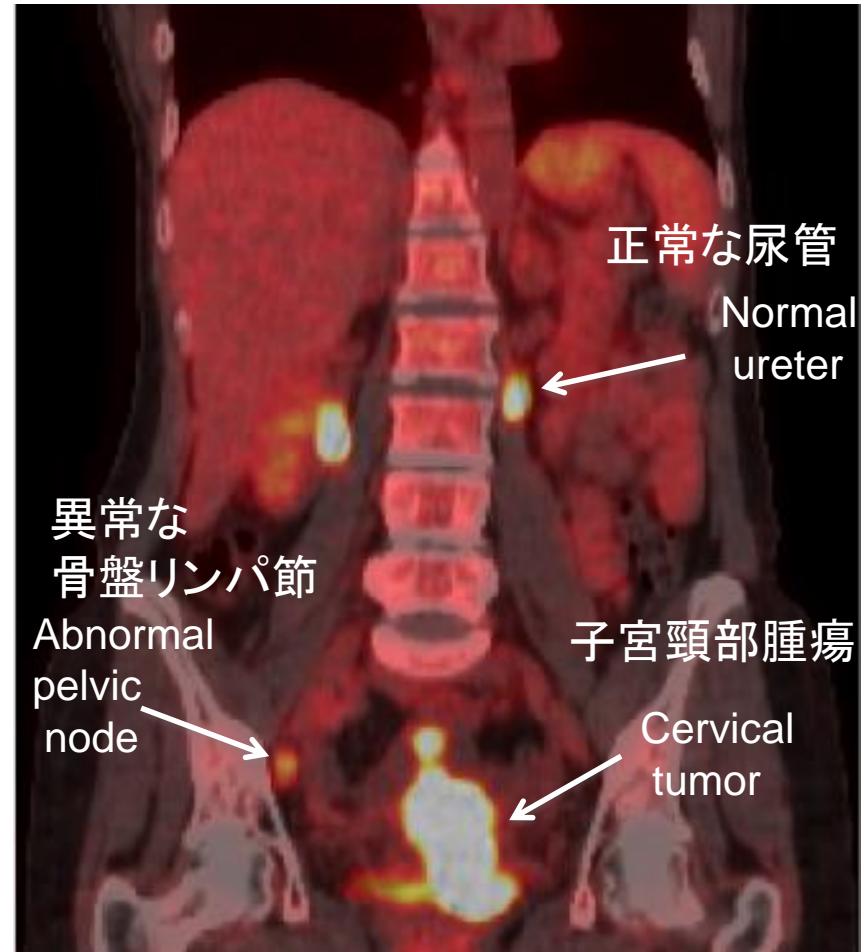
Staging - PET

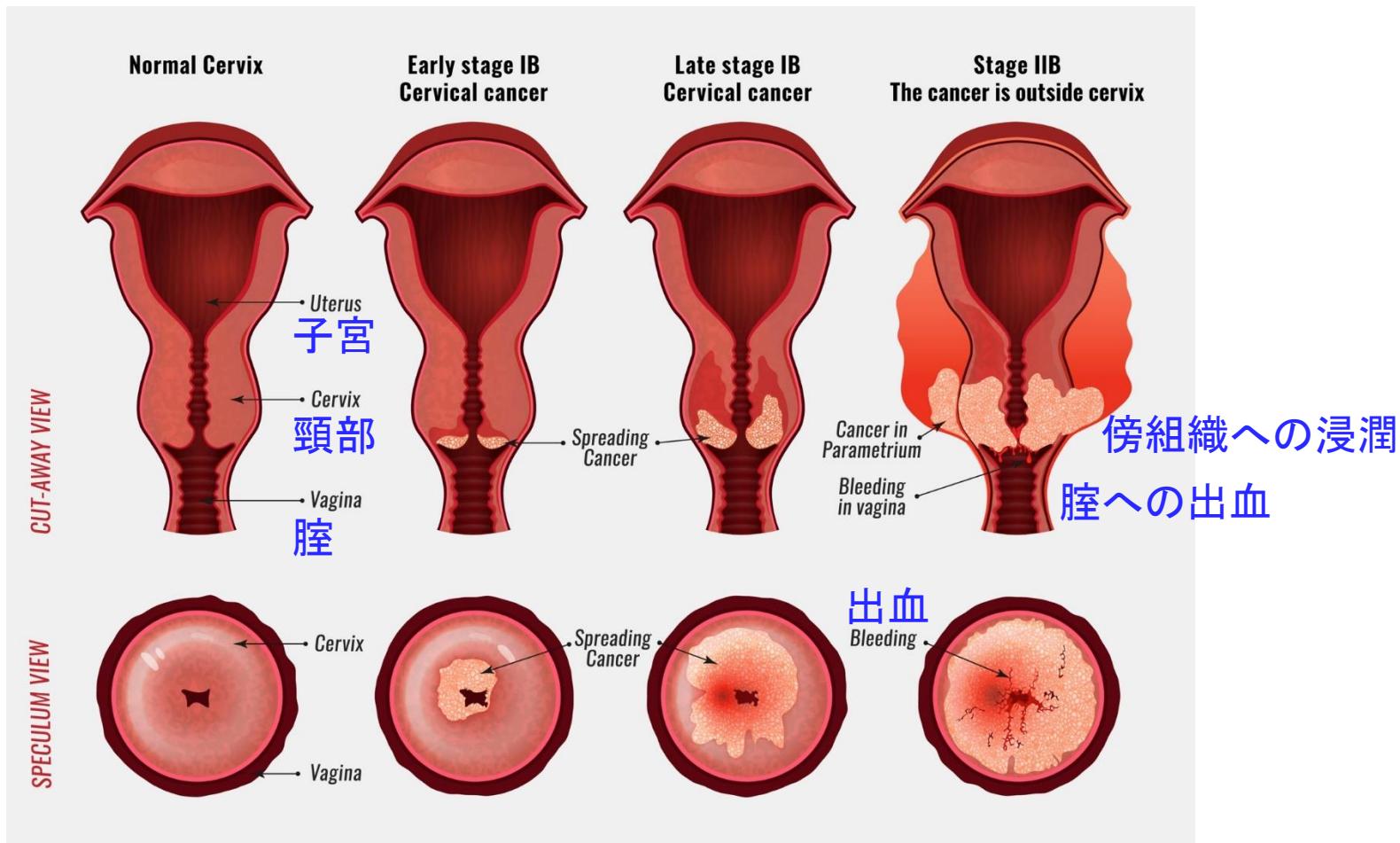
- PET/CT or CT scan is used to see if there is nodal metastasis.
- PET-CTやCTはリンパ節転移の評価に役立つ
- Pet scan is where radioactive sugar is injected and it goes to where tumor is
- PETは放射性同位元素をつけた糖質が腫瘍にいくことを利用した検査である



Staging - PET

- Pet scan is very sensitive for nodal disease
- PET検査はリンパ節転移を評価するのに感度が高い検査である





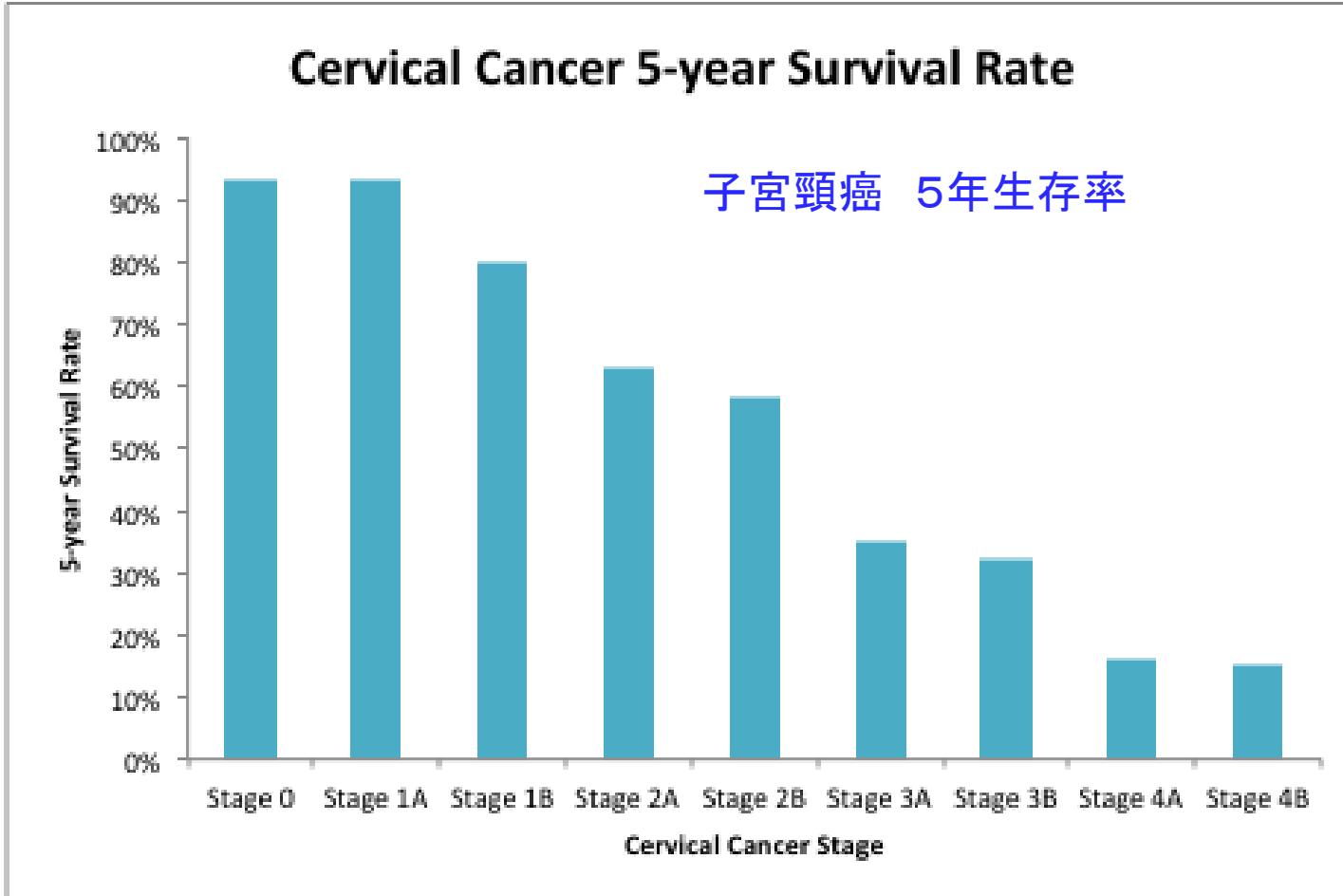
FIGO Staging

病期

IA:	Microscopic cervix only	顕微鏡的な病変のみ
IB:	Clinically visible cervix only	肉眼的確認できる病変
	1B1: lesion <4 cm	腫瘍<4cm
	1B2: lesion >4 cm	腫瘍>4cm
II:	Beyond cervix	子宮頸部周囲への広がり
	IIA: upper vagina	腔壁上部
	IIB: parametrium	傍組織への浸潤
III A:	lower 1/3 vagina	腔下1/3への浸潤
III B:	side wall/ hydronephrosis	骨盤壁への浸潤・水腎症
IV A:	bladder or rectum	膀胱・直腸への浸潤
IV B:	distant organs	遠隔臓器への転移

Prognosis by Stage

病期別の予後



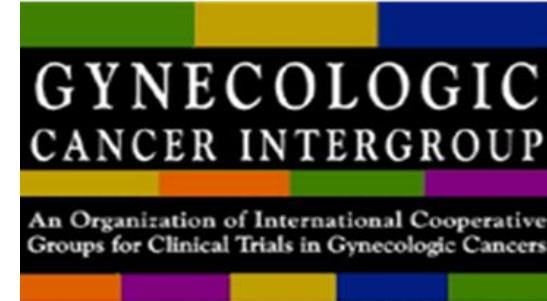
Prognostic Factors

予後因子

- Staging (size and tumor volume) 病期(腫瘍の大きさ)
- Lymph node involvement リンパ節転移
- Histology – Adenocarcinoma has higher rate of distant metastasis 組織型-腺癌の方が遠隔転移が多い
- Depth of cervical stroma and lymph vascular space invasion 子宮頸部間質への浸潤・脈管侵襲の程度
- ?Anemia – worse prognosis 貧血-より予後に影響
- Smoking – high risk of recurrence as well as higher toxicity from treatment 喫煙 再発リスク増加、治療への毒性



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY



TREATMENT BY STAGE

病期別の治療

Eriko Aotani Patient-Caregiver Symposium – Kyoto,
Japan -- September 13, 2018

Stage IA1- IB1

1A1-1B1期

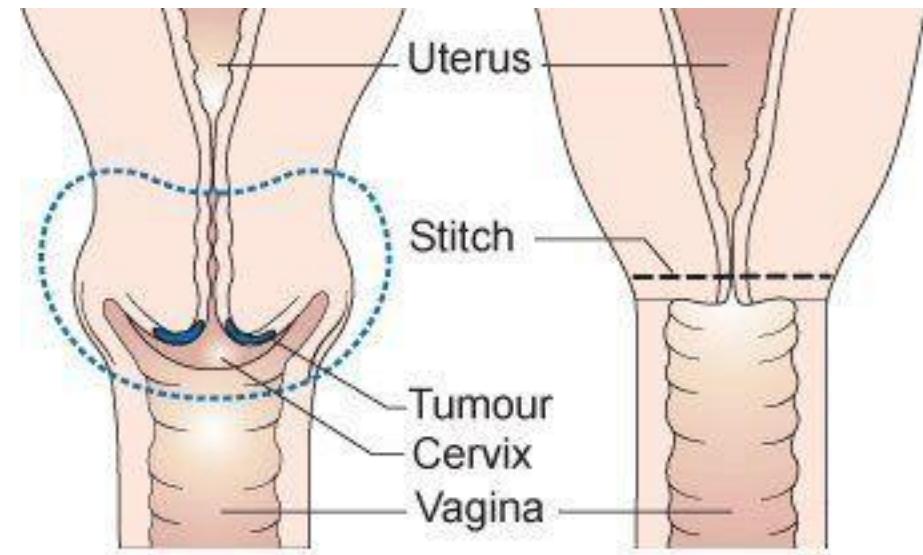
- Stage IA1 – with no cancer in blood vessels (LVSI)– cold knife cone 脈管侵襲がない—円錐切除
- Stage IA1 – with LVSI – take just uterus and cervix out by surgery 脈管侵襲あり-子宮・頸部を摘出
- Stage IA2-Stage IB1 – Options include: オプション
 - Radical trachelectomy with node dissection (next slide) 広汎子宮頸部切除およびリンパ節郭清(次のスライド)
 - Standard treatment is surgery with removal of uterus, cervix, 2-3 cm of vagina and lymph nodes 標準治療は子宮・子宮頸部摘出、2-3cmの腔壁切除およびリンパ節郭清

Trachelectomy 子宮頸部切除術

- Stage IA1-IB1- < 2cm,
negative nodes – for
women who want to
preserve fertility

1A1-1B1期 腫瘍が2cm未満・
リンパ節転移がなく、妊娠性温
存希望がある女性が対象となる

- Just remove the
cervix but leave uterus
so patient can have
babies in the future



子宮は残し、頸部のみ摘出する
ため将来的に妊娠が可能である



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Stage IB1- IB2

1B1-1B2期



- Tumor size < 5 cm – standard treatment is surgery with removal of uterus, cervix, 2-3 cm of vagina and lymph nodes 腫瘍5cm未満-標準治療は子宮・子宮頸部摘出、2-3cmの腔壁切除およびリンパ節郭清
- Post-op radiation therapy may be needed if factors are seen under microscope that indicate that the cancer has a high chance of coming back like positive lymph nodes 術後の放射線治療は顕微鏡での病理検査の結果で、リンパ節への転移など再発の危険が高い要素がある場合に考慮される

Stage IB2 > 5 cm - IVA

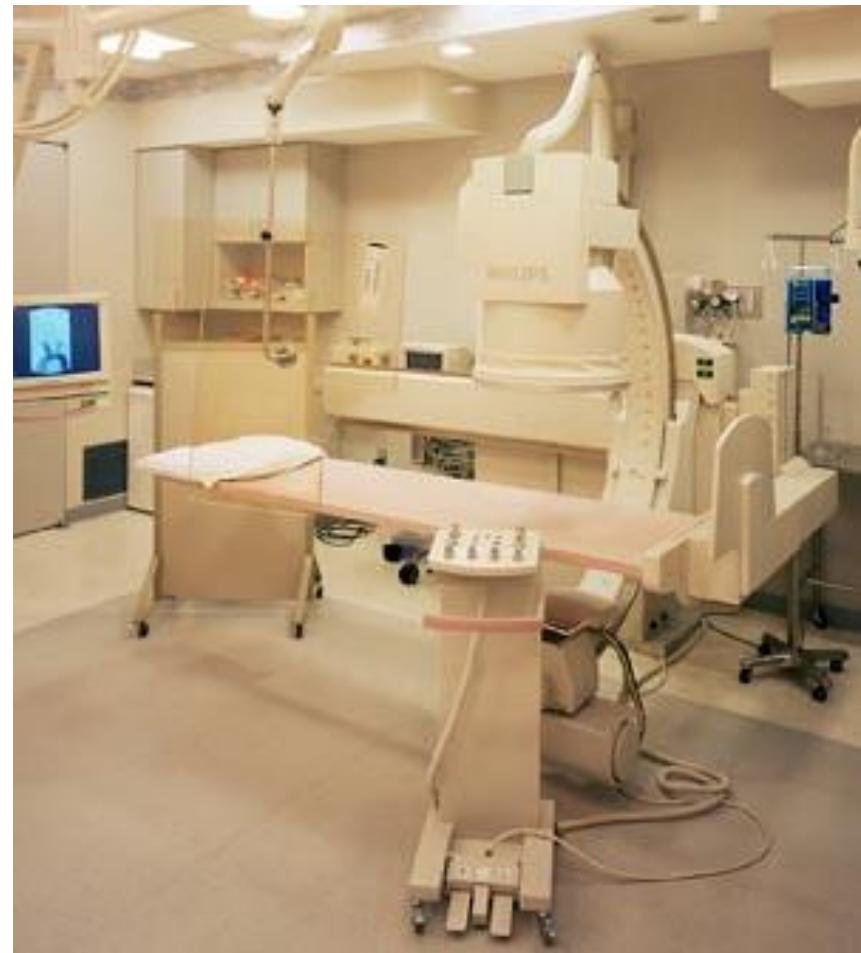
5cm超えるIB2からIVA期

- Standard treatment – concurrent chemotherapy and radiation therapy (combination of external beam and brachytherapy) (next few slides will talk about each component)
- 標準治療は同時化学放射線療法および放射線治療(外照射と腔内照射)
 - ここからのスライドでそれぞれ説明していきます

Radiation therapy – External Beam

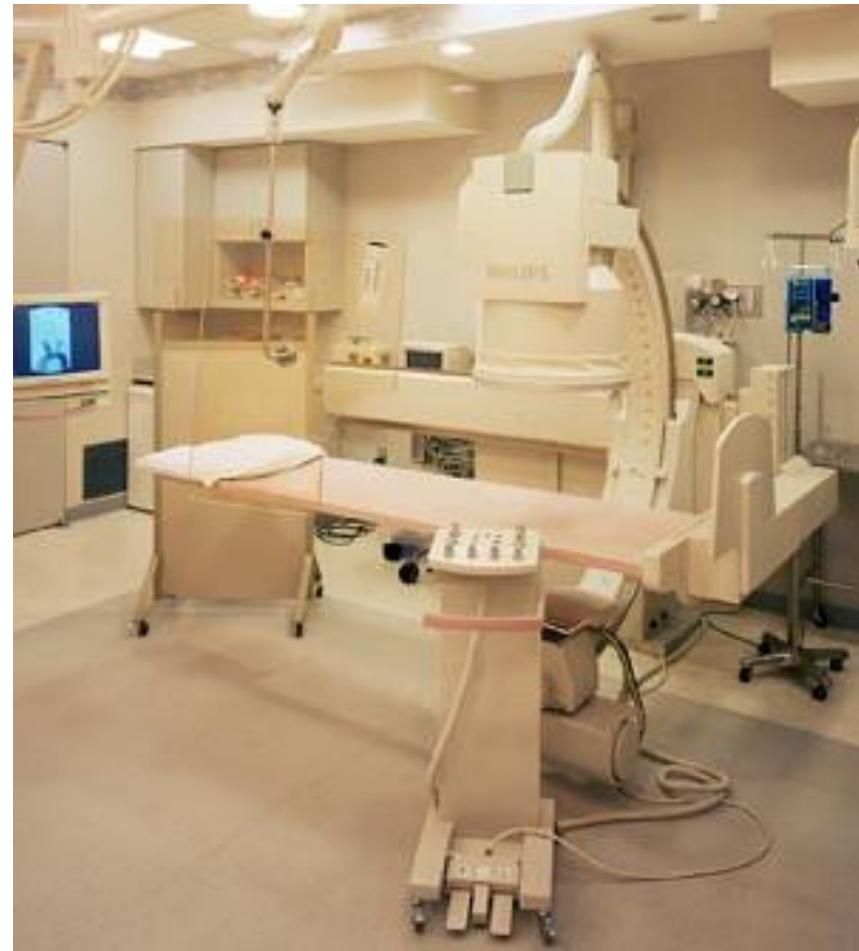
放射線治療-外照射

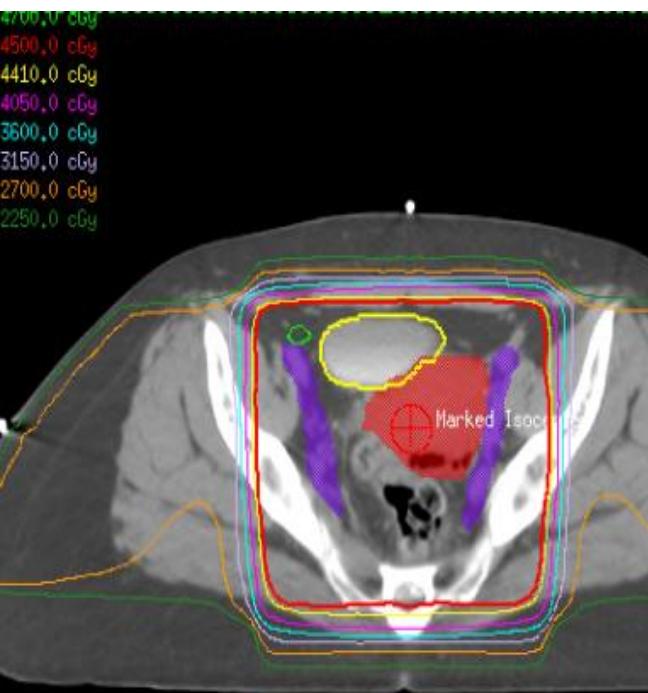
- Radiation therapy is the primary treatment for advanced disease
- 放射線治療は進行子宮頸癌で主体となる治療である
- All known disease should be in the field
- 判別できる病変は放射線の照射野内となるように治療範囲を定める



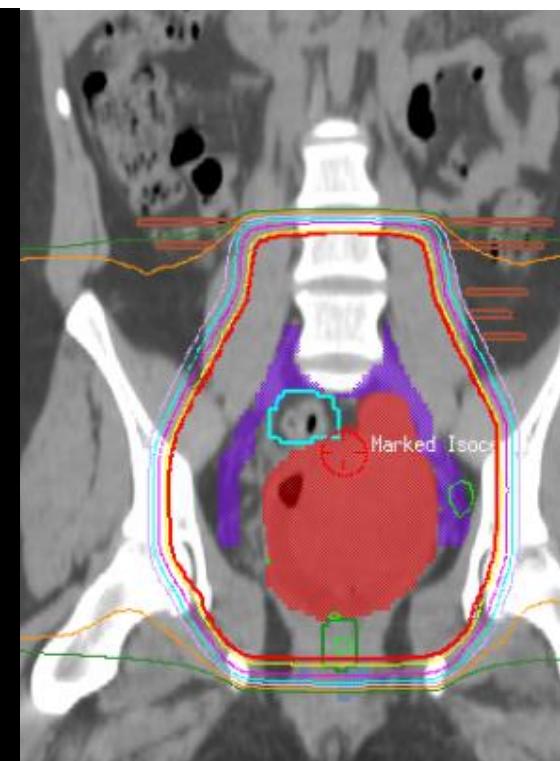
- Overall treatment time should be 56 days or less
- 治療期間は全体で56日以内とする
- Concurrent chemotherapy with radiation therapy improves survival
- 同時化学放射線療法は生存率を改善する

Radiation therapy – External Beam





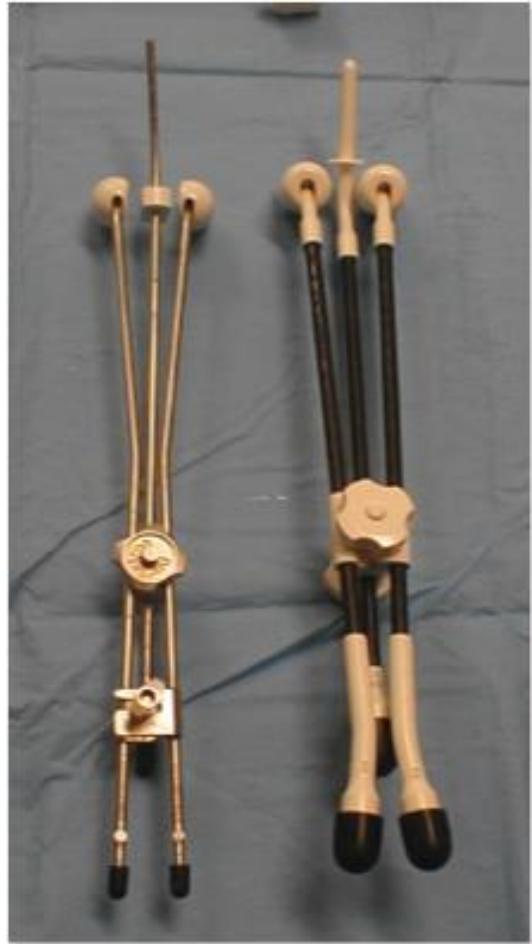
Radiation Fields 放射線治療の範囲



- Eriko Aotani Patient-Caregiver Symposium – Kyoto, Japan -- September 13, 2018

Radiation Therapy – Brachytherapy

放射線治療-腔内照射



Ovoids or
Colpostats – go
around the cervix
in the vagina

オボイド-
腔内から子宮頸部
周囲を

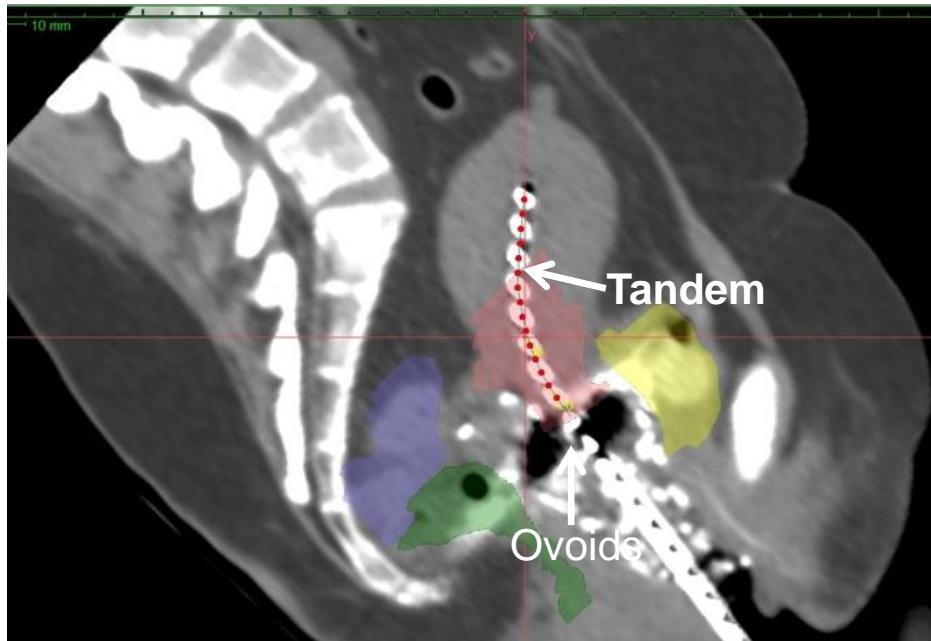


Tandem or intra-
uterine device – goes
inside the uterus

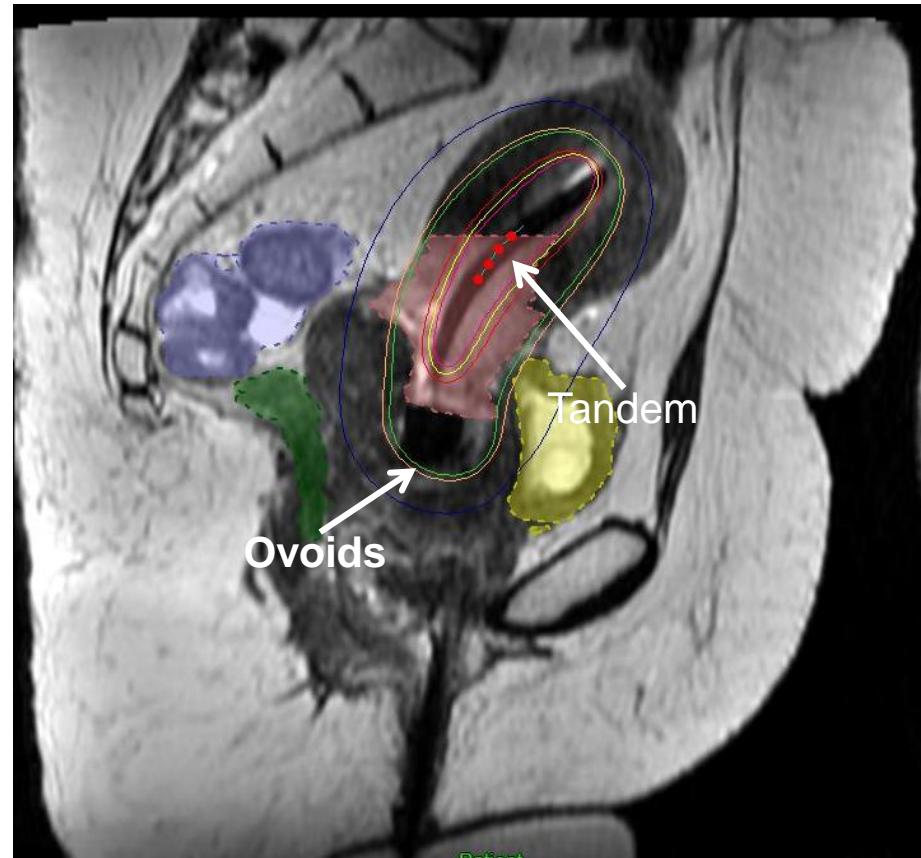
タンデム-
子宮内腔に



Radiation therapy Brachytherapy



CT scan



MRI Scan

Sequencing Chemo/RT

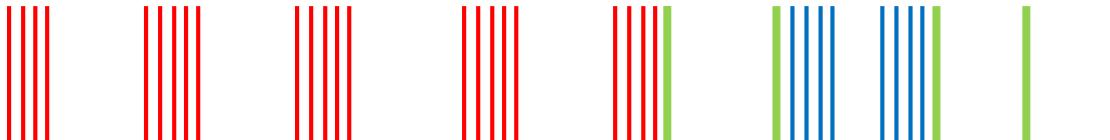
同時化学放射線療法

化学療法; シスプラチン

Cis



EBRT



放射線; 外照射療法

Week 1 Week 2 Week 3 Week 4 Week 5 Week 6

放射線; 外照射療法

放射線; 小線源療法

EBRT

45 Gy (or 50.4 Gy)

Brachytherapy

LDR/PDR: ~40-45 Gy

Cervical Cancer

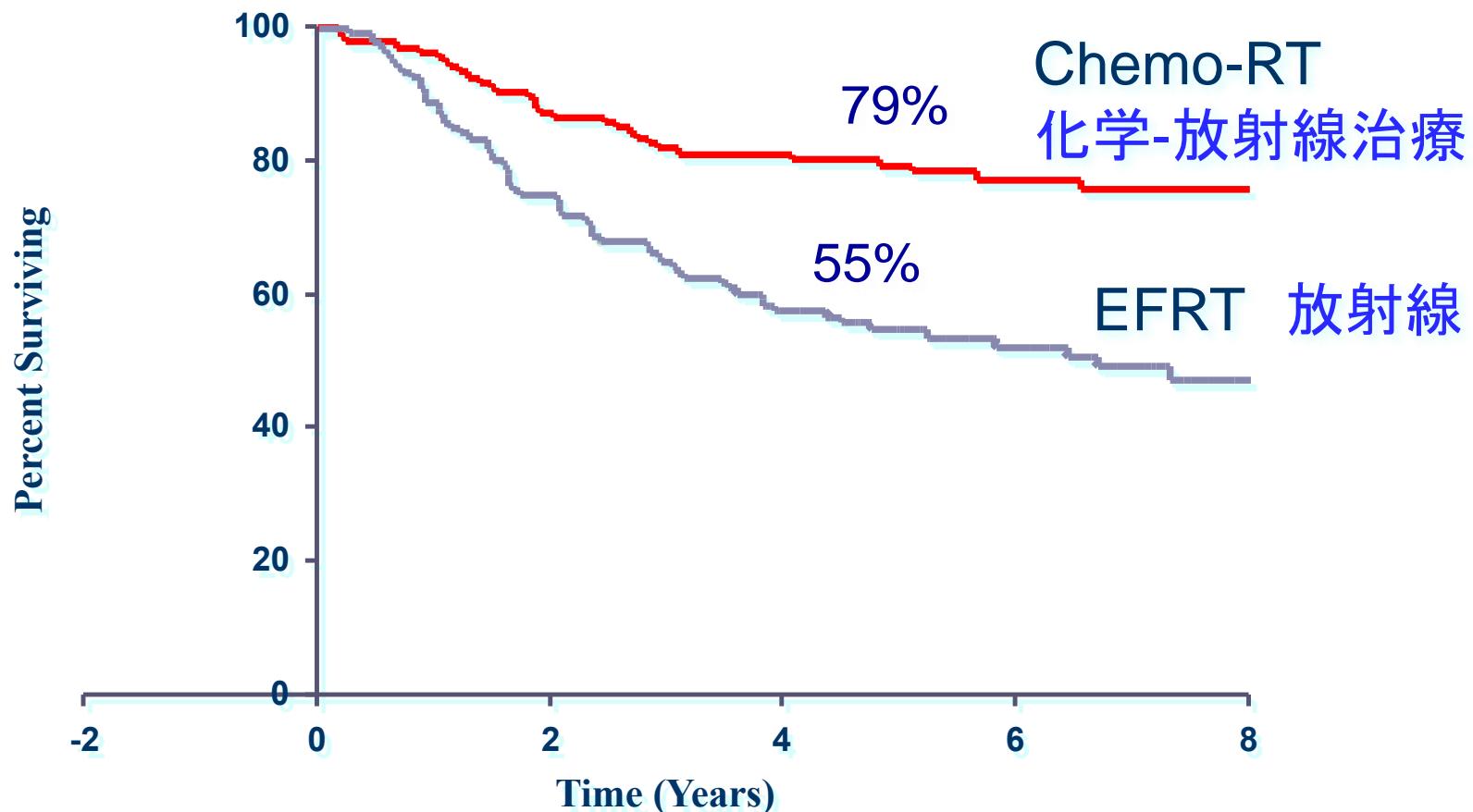


Pre-treatment MRI 治療前MRI

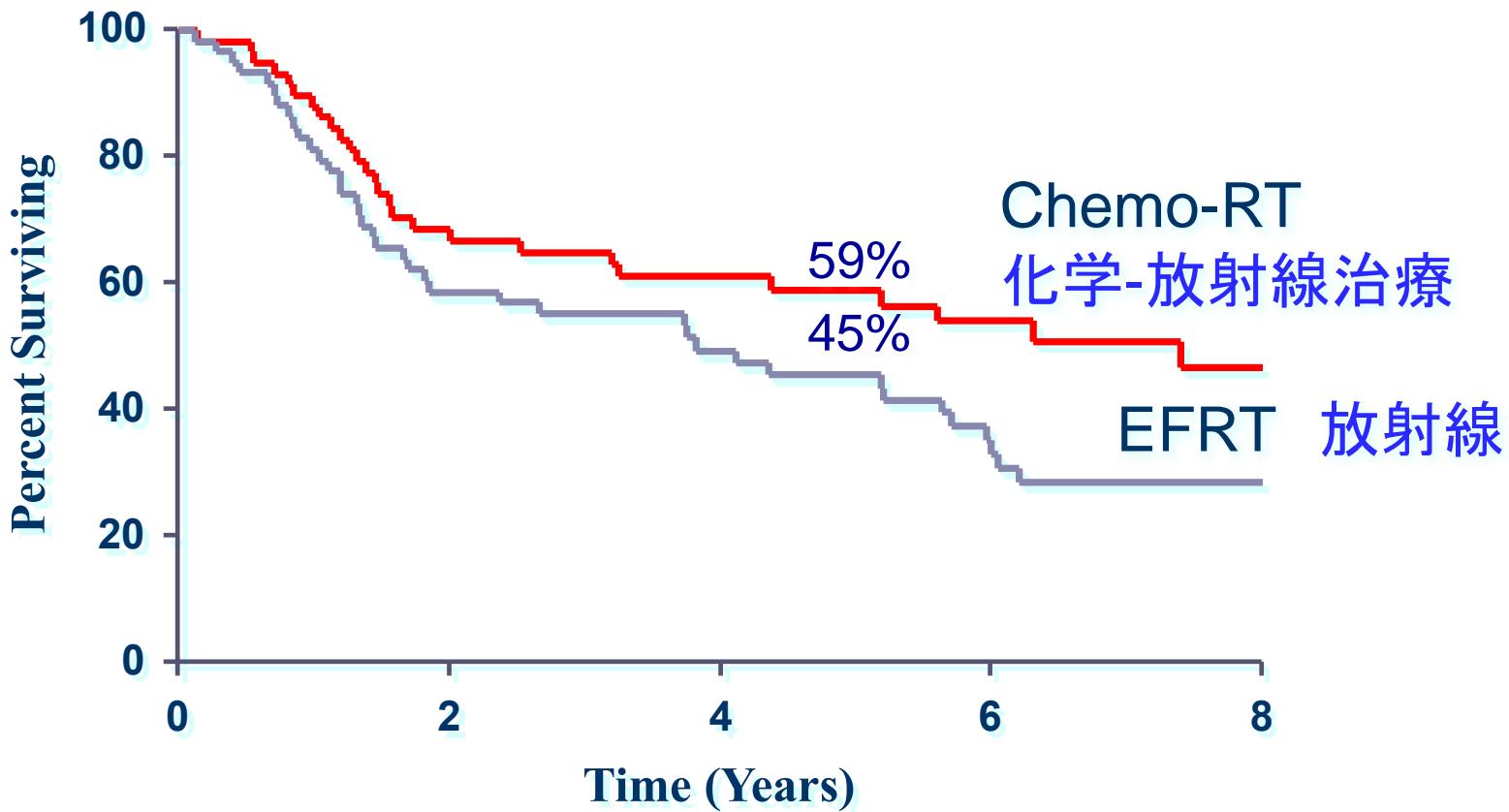


Post chemo/RT MRI 治療後MRI

Survival - Stage I-II RTOG update I-II期 生存率



Survival - Stages III–IV RTOG update III-IV期 生存率



Possible common side effects

一般的な副作用

- With surgery – possible bleeding during surgery and possible bladder leakage or unable to empty bladder 手術-出血、排尿障害
- With chemotherapy and radiation therapy – during treatment – diarrhea, nausea, and fatigue – all go away about 2-3 weeks after treatment and there medicines to help take care of these side effects 化学療法・放射線治療-治療中-下痢、吐き気、だるさ-すべて治療後2-3週間で改善する、また副作用を治療する薬剤もある

Standard Follow-up

標準的なフォローアップ



- First two years: 最初の2年間
 - Every 3-4 months – physical exam including pelvic
3-4ヶ月毎-内診を含めた診察
 - Pet/CT at 3-6 months if feasible 可能なら3-6ヶ月毎の
PET/CT検査
- Two- Five years: 2-5年後
 - Every 6 months - physical exam including pelvic
6ヶ月毎-内診を含めた診察
- After Five years patient is cured and can go back to regular doctor 5年過ぎたら安定したと判断し、かかりつけ医に戻ることも可能となる



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY



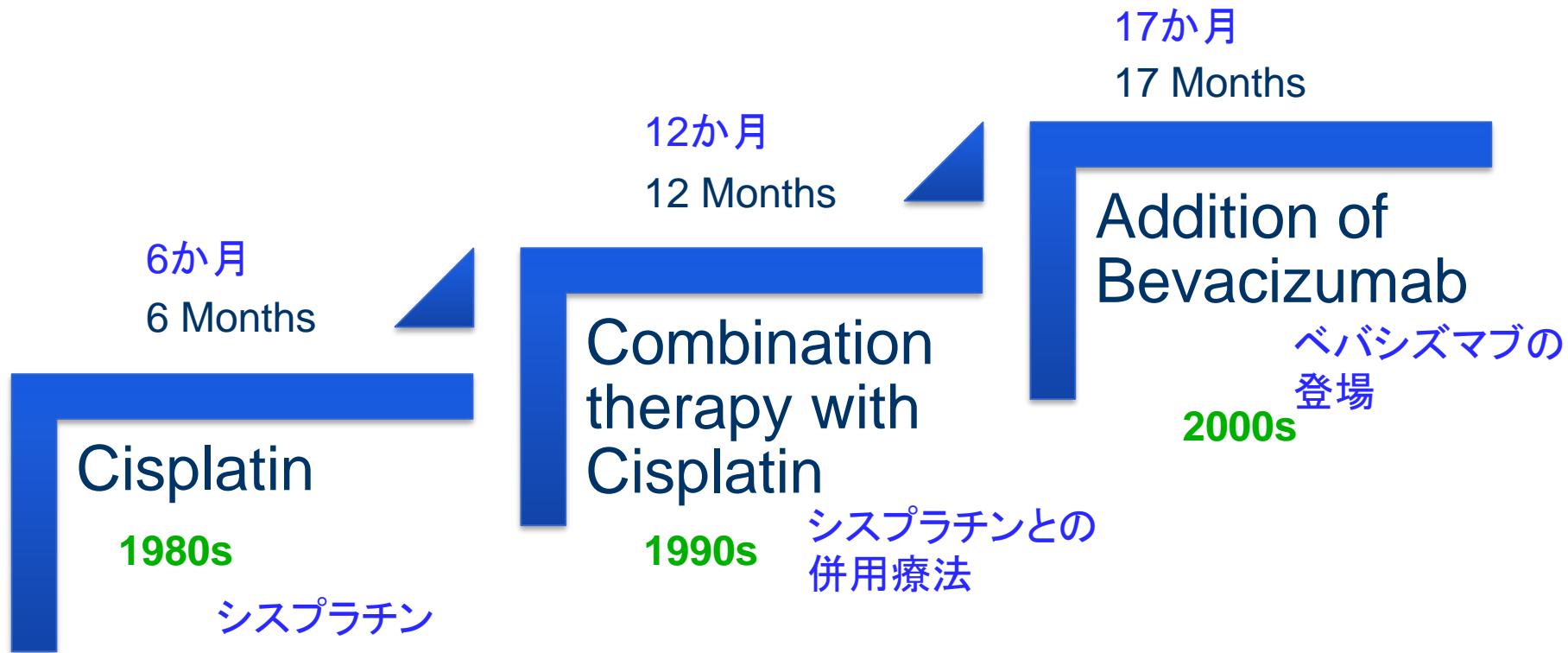
RECURRENT OR METASTATIC DISEASE

腫瘍の再発・転移

Eriko Aotani Patient-Caregiver Symposium –
Kyoto, Japan -- September 13, 2018

Survival in the metastatic and recurrent setting- 3 Decades of Progress

転移・再発に対する30年の進歩と生存



Eriko Aotani Patient-Caregiver Symposium –
Kyoto, Japan -- September 13, 2018



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Other Agents 他の薬剤



- FDA in the United States – just approved one immunotherapy drug - Pembrolizumab for second line treatment of patients with cervical cancer アメリカ食品医薬品局で-免疫チェックポイント阻害剤: ペンブロリズマブが子宮頸癌の化学療法の一つとして承認された
- Trials looking at other immunotherapy agents in the metastatic setting as well in locally advanced setting with concurrent chemotherapy and radiation therapy. 臨床試験では局所進行子宮頸癌に対する同時化学放射線療法のように転移病変への免疫チェックポイント阻害剤の可能性を探っている



INTERNATIONAL
GYNECOLOGIC
CANCER SOCIETY

Global disease



- Cervical cancer is a global disease
子宮頸癌は世界中でみられる病気である
- Need Protocols that can be used in countries where resources are limited
資源が限られる国でもできる対策が求められている
- Key for cure – **Prevention!** **予防！** が大切
Thank You ありがとうございました