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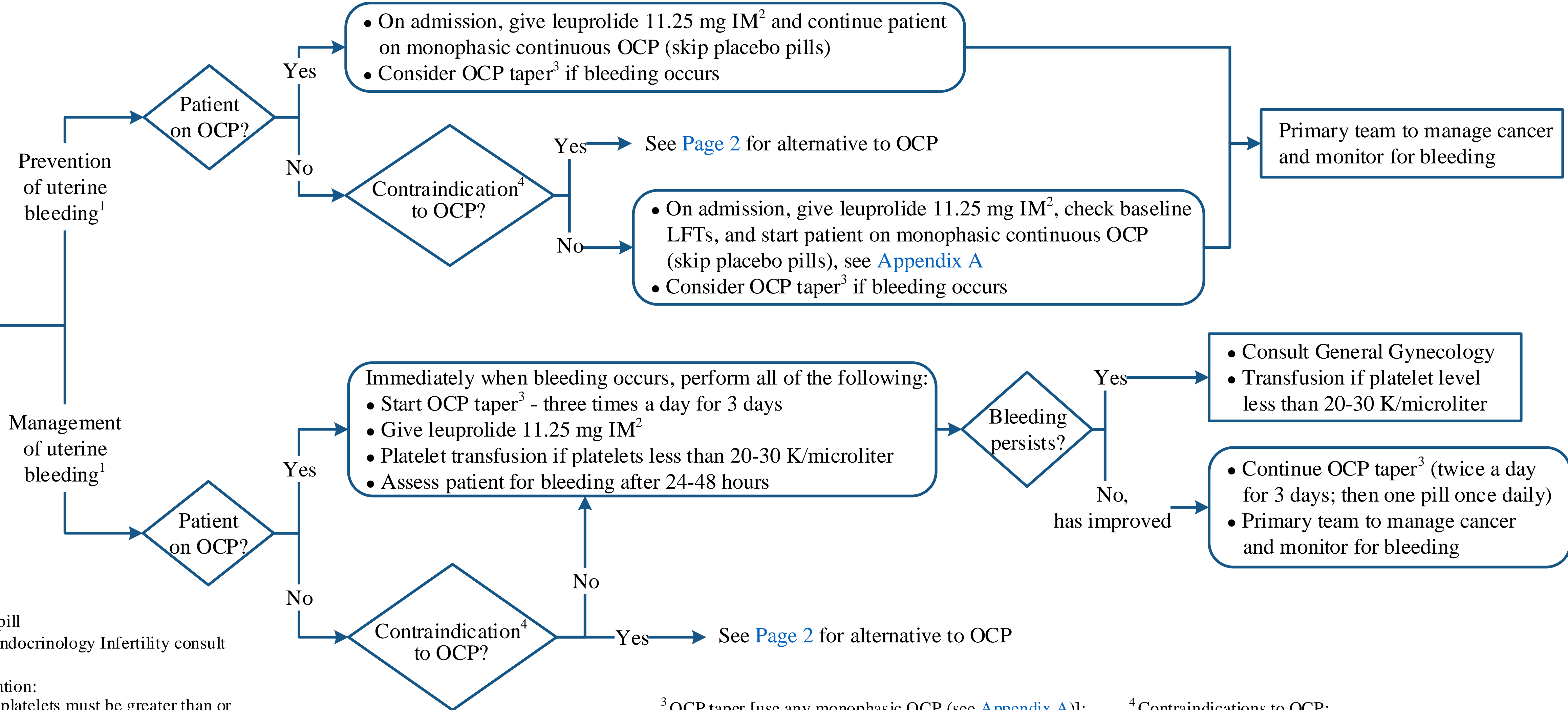
Abnormal Uterine Bleeding (AUB)

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care. This algorithm should not be used to treat pregnant women.*

Note: This algorithm is intended for use in hematologic malignancies



OCP = oral contraceptive pill

[1] Consider Reproductive Endocrinology Infertility consult if patient desires fertility

[2] Leuprolide IM administration:
- For IM administration, platelets must be greater than or equal to 50 K/microliter. Transfuse if platelets less than 50 K/microliter.
- May take two weeks for optimal effect
- Patient may have a two-week post-leuprolide withdrawal bleed
- Repeat leuprolide injection in 3 months
- Patients planned for stem cell transplant should receive injection 1 month prior to procedure
- Contraception should be recommended in women of childbearing potential as it is not ensured with leuprolide
- Contraindicated in women who are pregnant or breastfeeding

[3] OCP taper [use any monophasic OCP (see Appendix A)]:
- PO three times daily for 3 days, then
- PO twice daily for 3 days, then
- PO once daily continuously (skip placebo pills)

[4] Contraindications to OCP:
- History of breast cancer
- High risk of arterial or venous thrombosis (*e.g.*, active or history of DVT/PE, severe or uncontrolled hypertension, active tobacco use in females greater than 35 years of age, known vascular disease)
- No oral intake

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Department of Clinical Effectiveness V2
Approved by the Executive Committee of the Medical Staff on 04/30/2019

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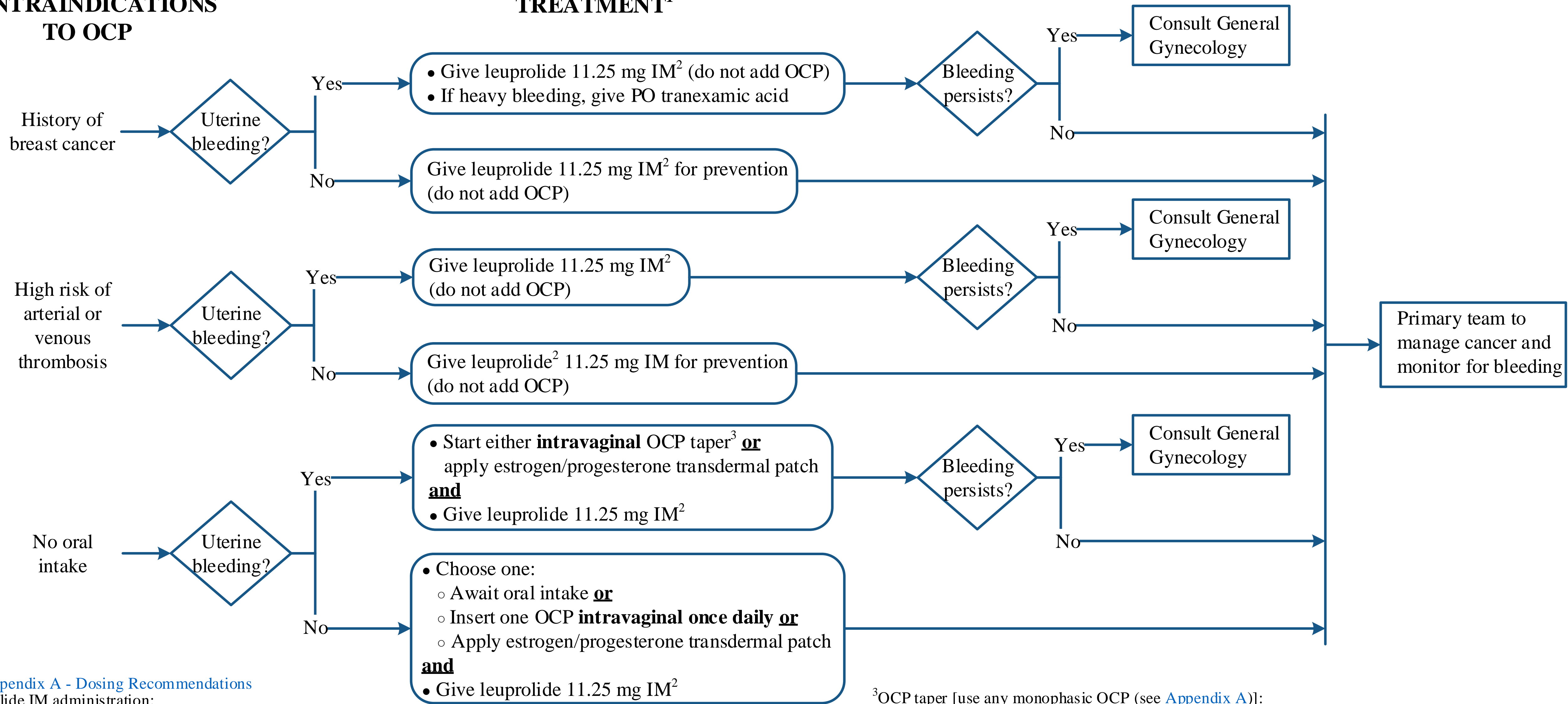

[1]See Appendix A - Dosing Recommendations

[2]Leuprolide IM administration:
- For IM administration, platelets must be greater than or equal to 50 K/microliter. Transfuse if platelets less than 50 K/microliter.
- Repeat leuprolide injection in 3 months
- May take two weeks for optimal effect
- Patients planned for stem cell transplant should receive injection 1 month prior to procedure
- Contraception should be recommended in women of childbearing potential as it is not ensured with leuprolide
- Contraindicated in women who are pregnant or breastfeeding

[3]OCP taper [use any monophasic OCP (see Appendix A)]:
- Intravaginal three times daily for 3 days
- Intravaginal twice daily for 3 days
- Intravaginal once daily continuously (skip placebo pills)

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APPENDIX A: Dosing Recommendations

	Product	Dosage Form	Strength	Comments
Contraceptives	**Ethinyl estradiol/norgestrel** (Lo/Ovral®, Cryselle®)	Tablet	0.03 mg/0.3 mg	• **Monophasic OCP** • PO or intravaginal (skip placebo pills)
	Ethinyl estradiol/desogestrel (Desogen®, Ortho-Cept®)	Tablet	0.03 mg/0.15 mg	• **Monophasic OCP** • PO or intravaginal (skip placebo pills)
	Ethinyl estradiol/norethindrone (Ortho-Novum® 1/35)	Tablet	0.035 mg/1 mg	• **Monophasic OCP** • PO or intravaginal (skip placebo pills)
	Ethinyl estradiol/levonorgestrel (Seasonique®) 90-day pack	Tablet	0.03 mg/0.15 mg	• **Monophasic OCP** • Consider prescribing at discharge for continuous OCP
	Ethinyl estradiol/norelgestromin (Xulane® Patch)	Patch	35 mcg/150 mcg per day	Apply one patch each week. Skip patch-free week if using to prevent vaginal bleeding.
	Medroxyprogesterone acetate (Depo-Provera®)	IM injection	150 mg	• For IM administration, platelets must be greater than or equal to 50 K/microliter. Transfuse if platelets less than 50 K/microliter. • Every 3 months
Hormonal Agents	Estrogens, conjugated, equine (Premarin®)	IV injection	25 mg/5 mL	25 mg IV every 6 hours for 24 hours
	Medroxyprogesterone acetate (Provera®)	Tablet	2.5 mg 10 mg	10 mg PO every 1-2 hours to total (60-120 mg), then 10 mg PO three times a day
	Megestrol acetate (Megace®)	Tablet	20 mg	1-2 tablets PO once daily
	Norethindrone acetate (Aygestin®)	Tablet	5 mg	• 5 mg once daily for light bleeding **or** • 5 mg three times daily for heavy bleeding
	Progesterone (Prometrium®)	Capsule	100 mg	1-2 capsules PO once daily
Other	Leuprolide acetate (Lupron® Depot)	IM injection	11.25 mg	• Contraindicated in women who are pregnant or breastfeeding • For IM administration, platelets must be greater than or equal to 50 K/microliter. Transfuse if platelets less than 50 K/microliter. • Start/continue OCP after first dose, if not contraindicated • Repeat every 3 months • Use may preserve fertility
	Tranexamic acid (Lysteda™)	Tablet	650 mg	• 1 tablet PO three times daily for 5 days • Lysteda ™ is not currently on the MD Anderson formulary
	Aminocaproic acid (Amicar®)	IV injection Tablet Oral Solution	250 mg/mL 500 mg 25% (250 mg/mL)	• 0.5-1 g/hour IV infusion • 1-2 g PO every 2-3 hours • 1-2 g (4-8 mL) PO every 2-3 hours • Consult Benign Hematology

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APPENDIX B: General Gynecology Options

Medical options: (See Appendix A for Dosing Recommendations)	Surgical options:
• Estrogen short-term for severe bleeding in breast cancer • IV estrogen for severe bleeding • Medroxyprogesterone acetate or other hormonal options • Leuprolide – may preserve fertility • Aminocaproic acid, consult Benign Hematology • Consider thromboelastogram (TEG) for diagnosis of coagulation abnormalities	• Dilation and curettage (D&C) • Endometrial ablation (hysterectomy if ablation unsuccessful and blood indices stabilized) • Balloon tamponade • Uterine artery embolization (UAE)

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SUGGESTED READINGS

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DEVELOPMENT CREDITS

This practice consensus algorithm is based on majority expert opinion of the Abnormal Uterine Bleeding work group at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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