

**Systemic Chemotherapy:**  
**Infugem (gemcitabine)**  
**Marqibo (vincristine liposome)**  
**Onivyde® (irinotecan liposome)**  
**Pemfexy (pemetrexed)**  
**Vyxeos (daunorubicine/cytarabine)**  
**Effective 07/31/2023**

<b>Plan</b>	<input checked="" type="checkbox"/> MassHealth UPPL <input type="checkbox"/> Commercial/Exchange	<b>Program Type</b>	<input checked="" type="checkbox"/> Prior Authorization
<b>Benefit</b>	<input type="checkbox"/> Pharmacy Benefit <input checked="" type="checkbox"/> Medical Benefit (NLX)		<input type="checkbox"/> Quantity Limit <input type="checkbox"/> Step Therapy
<b>Specialty Limitations</b>			
<b>Contact Information</b>	<b>Specialty Medications</b>		
	All Plans	Phone: 866-814-5506	Fax: 866-249-6155
	<b>Non-Specialty Medications</b>		
	MassHealth	Phone: 877-433-7643	Fax: 866-255-7569
	Commercial	Phone: 800-294-5979	Fax: 888-836-0730
	Exchange	Phone: 855-582-2022	Fax: 855-245-2134
	<b>Medical Specialty Medications (NLX)</b>		
	All Plans	Phone: 844-345-2803	Fax: 844-851-0882
<b>Exceptions</b>			

### Overview

No PA	Drugs that require PA
Adrucil® # (fluorouracil injection)	Infugem® (gemcitabine) <sup>MB</sup>
Alimta® # (pemetrexed) <sup>MB</sup>	Marqibo® (vincristine liposome) <sup>MB</sup>
Camptosar® # (irinotecan) <sup>MB</sup>	Onivyde® (irinotecan liposome) <sup>MB</sup>
cytarabine <sup>MB</sup>	Pemfexy® (pemetrexed) <sup>MB</sup>
daunorubicin <sup>MB</sup>	Vyxeos® (daunorubicin/cytarabine) <sup>MB</sup>
Etopophos® (etoposide phosphate) <sup>MB</sup>	
etoposide injection <sup>MB</sup>	
fluorouracil injection <sup>MB</sup>	
gemcitabine vial <sup>MB</sup>	
leucovorin	
oxaliplatin <sup>MB</sup>	
pemetrexed <sup>MB</sup>	
Xeloda® # (capecitabine)	
vincristine <sup>MB</sup>	

# This is a brand-name drug with FDA "A"-rated generic equivalents. PA is required for the brand, unless a particular form of that drug (for example, tablet, capsule, or liquid) does not have an FDA "A"-rated generic equivalent.

MB This drug is available through the health care professional who administers the drug or in an outpatient or inpatient hospital setting. MassHealth does not pay for this drug to be dispensed through the retail pharmacy.

### **Coverage Guidelines**

Authorization may be reviewed on a case by case basis for members who are new to the plan currently receiving treatment with requested medication excluding when the product is obtained as samples or via manufacturer's patient assistance programs.

### **OR**

Authorization may be granted for members when all the following criteria are met, and documentation is provided:

#### **Infugem® (gemcitabine)**

1. Diagnosis of breast cancer, non-small cell lung cancer, ovarian cancer, or pancreatic cancer
2. Prescriber is a hematologist or oncologist
3. Member  $\geq 18$  years of age
4. Appropriate dosing
5. Physician attestation of inadequate response, adverse reaction or contraindication to a gemcitabine product available without prior authorization

#### **Marqibo® (vincristine liposome)**

1. Diagnosis of Philadelphia chromosome-negative acute lymphoblastic leukemia
2. Prescriber is a hematologist or oncologist
3. Appropriate dosing
4. Member  $\geq 18$  years of age
5. Medical records documenting a trial with **TWO** previous chemotherapy regimens (see appendix for examples)

#### **Onivyde® (irinotecan liposome)**

1. Diagnosis of metastatic adenocarcinoma of the pancreas
2. Prescriber is a hematologist or oncologist
3. Appropriate dosing
4. Member  $\geq 18$  years of age
5. Requested agent will be used in combination with fluorouracil and leucovorin
6. Physician attestation of inadequate response or adverse reaction to ONE or contraindication to BOTH of the following: gemcitabine- and fluoropyrimidine-based chemotherapy regimen (see appendix for gemcitabine- and fluoropyrimidine-based chemotherapy regimens)

#### **Pemfexy® (pemetrexed)**

1. Diagnosis of malignant pleural mesothelioma or NSCLC
2. Prescriber is a hematologist or oncologist
3. Appropriate dosing
4. Physician attestation of inadequate response, adverse reaction, or contraindication to a pemetrexed product available without prior authorization

#### **Vyxeos® (daunorubicin/cytarabine)**

1. Diagnosis of newly-diagnosed therapy-related acute myeloid leukemia (t-AML) or AML with myelodysplasia-related changes (AML-MRC) or MDS/CMML
2. Prescriber is a hematologist or oncologist



3. Appropriate dosing
4. Member  $\geq 1$  year of age
5. Physician attestation of inadequate response, adverse reaction or contraindication to use of separate daunorubicin and cytarabine chemotherapy agents

### **Continuation of Therapy**

Reauthorization by physician will infer a positive response to therapy.

### **Limitations**

1. Initial approvals will be granted 3 months
2. Reauthorizations will be granted for 6 months

### **Appendix**

#### **Examples of Chemotherapy Regimens (not all inclusive) for the Treatment of Acute Lymphoblastic Leukemia**

- **CALGB 8811 Larson regimen:** daunorubicin, vincristine, prednisone, pegaspargase, and cyclophosphamide
- **Linker 4-drug regimen:** daunorubicin, vincristine, prednisone, and pegaspargase
- **Hyper-CVAD +/- rituximab:** hyper-fractionated cyclophosphamide, vincristine, doxorubicin, and dexamethasone, alternating with high-dose methotrexate and cytarabine; with or without rituximab for CD20-positive disease
- **MRC UKALLXII/ECOG2993 regimen:** daunorubicin, vincristine, prednisone, and pegaspargase (induction phase 1) and cyclophosphamide and 6-mercaptopurine (induction phase 2)
- **GRAALL-2005 regimen:** daunorubicin, vincristine, prednisone, pegaspargase, and cyclophosphamide with rituximab for CD20-positive disease
- **COG AALL0434 regimen with nelarabine (for T-ALL):** daunorubicin, vincristine, prednisone, pegaspargase, with nelarabine added to the consolidation regimen
- **COG AALL0232 regimen:** daunorubicin, vincristine, prednisone, and pegaspargase (patients aged  $\leq 21$  years)
- **PETHEMA ALL-96 regimen:** daunorubicin, vincristine, prednisone, pegaspargase, and cyclophosphamide (patients aged  $< 30$  years)
- **CALGB 10403 regimen:** daunorubicin, vincristine, prednisone, and pegaspargase
- **DFCI ALL regimen based on DFCI Protocol 00-01:** doxorubicin, vincristine, prednisone, high-dose methotrexate, and pegaspargase
- **USC/MSKCC ALL regimen based on CCG-1882 regimen:** daunorubicin, vincristine, prednisone, and methotrexate with augmented pegaspargase (patients aged  $< 60$  years)
- **Blinatumomab (for B-ALL) (category 1)**
- **Inotuzumab ozogamicin (for B-ALL) (category 1)**
- Clofarabine
- **Clofarabine-containing regimens**
- **Fludarabine-based regimens**
- **Cytarabine-containing regimens**
- Alkylator combination regimens
- **Nelarabine (for T-ALL)**
- **Nelarabine, etoposide, cyclophosphamide (young and fit patients)**
- **MOpAD regimen:** methotrexate, vincristine, pegaspargase, dexamethasone; with rituximab for CD20-positive disease
- **Tisagenlecleucel (for B-ALL) (patients  $< 26$  years and with refractory disease or  $\geq 2$  relapses)**



- **Brexucabtagene** (for B-ALL)
- Bortezomib + chemotherapy
- **Daratumumab** (category 2B)
- **HiDAC**: high-dose cytarabine
- Mitoxantrone, etoposide, and cytarabine
- **Venetoclax + chemotherapy** (e.g., decitaibine, hyperCVAD, nelarabine, mini-hyper CVD) (Category 2B)

### **Gemcitabine- and Fluoropyrimidine-based Chemotherapy Regimens (not all inclusive)**

Per NCCN guidelines for pancreatic adenocarcinoma, the following is a list of gemcitabine- and fluoropyrimidine-based first-line options for locally advanced/unresectable and metastatic pancreatic adenocarcinoma:

- FOLFIRINOX
- Modified FOLFIRINOX
- Gemcitabine + albumin-bound paclitaxel
- Gemcitabine + erlotinib
- Gemcitabine + capecitabine
- Gemcitabine + cisplatin (only for known BRCA 1/2 or APLB2 mutations)
- Gemcitabine
- Capecitabine (category 2B)
- Continuous infusion 5-FU (category 2B)
- Fixed-dose-rate gemcitabine, docetaxel, capecitabine (GTX regimen) (category 2B)
- Fluoropyrimidine + oxaliplatin (5-FU + leucovorin + oxaliplatin [OFF] or CapeOX) (Category 2b)

### **References**

1. Etopophos® [package insert on the internet] Montgomery (AL): H2-Pharma, LLC.; 2021 Dec. Available from: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>.
2. Etoposide: drug information. In: Basow DS (Ed). UpToDate [database on the Internet]. Waltham (MA): UpToDate; 2021 [cited 2021 Dec 29]. Available from: <http://www.uptodate.com/uptd/index.do>.
3. Infugem® (gemcitabine in sodium chloride) [prescribing information]. Cranbury (NJ): Sun Pharmaceutical Industries, Inc.; 2019 Dec. Available from: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>.
4. Sun Pharma Launches Ready-to-Infuse INFUGEM in the U.S. [press release on the internet]. BioSpace; 2019 Apr 8 [cited 2019 Nov 27]. Available from: <https://www.biospace.com/article/releases/sun-pharma-launches-ready-to-infuse-infugem-in-the-u-s/>.
5. Marqibo® [package insert]. Irvine (CA): Talon Pharmaceuticals; 2020 Jun. Available from: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>.
6. FDA approves Marqibo to treat rare type of leukemia [press release on the Internet]. Fierce Pharma; 2012 Aug 10 [cited 2019 Oct 21]. Available from: <http://www.fiercepharma.com/pharma/fda-approves-marqibo-to-treat-rare-type-of-leukemia>.
7. Larson RA. Induction therapy for Philadelphia chromosome negative acute lymphoblastic leukemia in adults. In Basow DS (Ed). UpToDate [database on the Internet]. Waltham (MA): UpToDate; 2019 [cited 2019 Oct 21]. Available from: <http://www.uptodate.com/uptd/index.do>.
8. Harrison RS, Lyseng-Williamson KA. Vincristine Sulfate Liposome Injection. A Guide to its Use in Refractory or Relapsed Acute Lymphoblastic Leukemia. *BioDrugs*. 2013;27:69-74.
9. Liesveld J, Asselin B. It's ALL in the Liposomes: Vincristine Gets A New Package. *J Clin Oncol*. 2013 Feb;31(6):676-83.
10. Davis T, Farag SS. Treating relapsed or refractory Philadelphia chromosome-negative acute lymphoblastic leukemia: liposome-encapsulated vincristine. *International Journal of Nanomedicine*. 2013;8:3479-88.



11. Silverman JA, Deitcher SR. Marqibo (vincristine sulfate liposome injection) improves the pharmacokinetics and pharmacodynamics of vincristine. *Cancer Chemother Pharmacol.* 2013;71:555-564.
12. O'Brien S, Schiller G, Lister J, Damon L, Goldberg S, Aulitzky W, et al. High-Dose Vincristine Sulfate Liposome Injection for Advanced, Relapsed, and Refractory Adult Philadelphia Chromosome-Negative Acute Lymphoblastic Leukemia. *J Clin Oncol.* 2013 Feb;31(6):676-83.
13. NCCN Practice Guidelines in Oncology. Acute Lymphoblastic Leukemia Version 3.2021 [guideline on the Internet]. 2021 Dec 16 [cited 2021 Dec 29]. Available from: [http://www.nccn.org/professionals/physician\\_gls/pdf/all.pdf](http://www.nccn.org/professionals/physician_gls/pdf/all.pdf)
14. Onivyde® [package insert]. Cambridge (MA): Merrimack Pharmaceuticals, Inc.; 2020 Dec. Available from: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>.
15. FDA approves new treatment for advanced pancreatic cancer [press release on the Internet]. Rockville (MD): Food and Drug Administration (US); 2015 Oct 22 [cited 2017 Nov 14]. Available at: <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm468654.htm>.
16. Wang-Gillam A, Li CP, Bodoky G, Dean A, Shan YS, Jameson G et al. Nanoliposomal irinotecan with fluorouracil and folinic acid in metastatic pancreatic cancer after previous gemcitabine-based therapy (NAPOLI-1): a global, randomised, open-label, phase 3 trial. *Lancet.* 2015 Nov 20.
17. National Comprehensive Cancer Network (NCCN). Pancreatic Adenocarcinoma Version 3.2019. [Guideline on the Internet]. 2021 Feb 25 [Cited 2021 Dec 29]. Available from: [https://www.nccn.org/professionals/physician\\_gls/pdf/pancreatic.pdf](https://www.nccn.org/professionals/physician_gls/pdf/pancreatic.pdf).
18. Vyxeos® [prescribing information]. Palo Alto (CA): Jazz Pharmaceuticals; 2021 Apr. Available from: <https://dailymed.nlm.nih.gov/dailymed/index.cfm>.
19. National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology Acute Myeloid Leukemia. Version 1.2022. [Guideline on the Internet]. 2021 Dec 2 [cited 2021 Dec 29]. Available from: [https://www.nccn.org/professionals/physician\\_gls/pdf/aml.pdf](https://www.nccn.org/professionals/physician_gls/pdf/aml.pdf).
20. Weiss MA, Aliff TB, Tallman MS, Frankel SR, Kalaycio ME, Maslak PG, et al. A Single, High Dose of Idarubicin, Combined with Cytarabine as Induction Therapy for Adult Patients with Recurrent or Refractory Acute Lymphoblastic Leukemia. *Cancer.* 2002 Aug;95(3):581-5.
21. Larson RA. Treatment of relapsed or refractory acute lymphoblastic leukemia in adults. In Basow DS (Ed). UpToDate [database on the Internet]. Waltham (MA): UpToDate; 2021 [cited 2021 Dec 29]. Available from: <http://www.utdol.com/utd/index.do>.
22. Kantarjian H, Gandhi V, Cortes J, Verstovsek S, Du M, Garcia-Manero G, et al. Phase 2 clinical and pharmacological study of clofarabine in patients with refractory or relapsed acute leukemia. *Blood.* 2003 Oct;102(7):2379-86.
23. ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2019 Oct 21]. Available from: <http://clinicaltrials.gov>.

### Review History

02/08/2023 - Reviewed and created for Feb P&T; Matched MH UPPL criteria to be in compliance with Masshealth unified formulary requirements. Effective 4/1/23.

04/12/23 – Reviewed and updated for Apr P&T. Added Alimta and pemetrexed to Overview table under no PA. No clinical changes. Effective 5/1/23.

05/10/23 – Reviewed and updated for P&T. Vyxeos was added to MB management for consistency with the rest of the class. Effective 6/5/23

06/14/23 – Reviewed and updated for P&T. Etopophos® (etoposide phosphate) will be managed under MB no PA. Effective 7/31/23.

