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Table 1 - Administration techniques for different patches²⁻⁷

Drug	Common brand name	Wash area with soap prior to application?	Can patch be cut?	Administration frequency	Site of application	Drug-free interval needed?
rivastigmine	Exelon®	yes - but area must be clean, dry, & hairless	do not cut	change every 24 hours	upper or lower back, upper arm, or chest	no
lidocaine	Lidoderm®	yes - area must be clean and dry	yes	apply for 12 hours within a 24 hour period	intact skin to cover the most painful area	yes - at least 12 hours patch-free
nitroglycerin	Nitro-Dur®	yes - area must be clean, dry, & hairless	do not cut	apply for 12 to 14 hours	upper arm or body; do not apply to extremities or below knee or elbow	yes - 10 to 12 hours patch-free
nicotine	NicoDerm®	yes - area must be clean, dry, & hairless	do not cut	change every 24 hours	anywhere on body	no
fentanyl	Duragesic®	do not use soap or alcohol over site of application; use only water	do not cut	can be worn continuously for 72 hours	chest, back, flank, or upper arm	no
scopolamine	Transderm Scop®	apply to dry skin	do not cut	can be worn for up to 3 days	behind one ear	no

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Pharmacy Focus

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Formulary Update

Tocilizumab (Actemra®)

This drug was added to the formulary to treat COVID19. It is indicated for cytokine release syndrome (CRS) in adults and pediatric patients 2 years of age and older with chimeric antigen receptor (CAR) T cell-induced severe or life-threatening CRS.

Anakinra (Kineret®)

Although FDA-approved for rheumatoid arthritis, is being added to our formulary for off-label use of hyperinflammatory syndrome as a complication of COVID19.

Acetaminophen intravenous (Ofirmev®)

The use of this formulary drug is being expanded to include extremely low-birth-weight neonates for closure of patent ductus arteriosis (PDA). The therapeutic advantage over current formulary agent indomethacin is that acetaminophen has minimal to no gastrointestinal effects and minimal to no renal toxicity.

Capsaicin (Capzasin®)

This is an over-the-counter topical cream that will be used off-label to treat cannabinoid hyperemesis syndrome (CHS). A thick coat of the cream is typically applied to clean, dry area of the abdomen for this indication.

Daratumumab/hyaluronidase-fihj (Darzalex Faspro®)

This medication is used for adult patients who have multiple myeloma in combination with bortezomib, melphalan and prednisone in newly diagnosed patients who are ineligible for autologous stem cell transplant. **Restricted to Luckow Pavilion.**

Sacituzumab govietcan (Trodelvy®)

This medication is used for metastatic triple negative breast cancer in patients who have received at least 2 prior therapies for metastatic disease. **Restricted to Luckow Pavilion.**

Continued on page 3.....

Drug Info Corner

Andrew Estafanous
FDU PharmD Candidate 2021



Question: What are some options to help patients stop smoking?

Response: Cigarette smoking is responsible for more than 480,000 deaths per year in the United States, including more than 41,000 deaths resulting from secondhand smoke exposure. This is about one in five deaths annually, or 1,300 deaths every day. On average, smokers die 10 years earlier than nonsmokers.¹ There are different forms of nicotine replacement therapies available without a prescription that individuals can use as an aide to stop smoking.

Nicotine gum: Nicotine gum can be used routinely by chewing one piece of gum every 1 to 2 hours for the first 6 weeks, followed by one piece every 2 to 4 hours for 3 weeks, and then one piece every 4 to 8 hours for 3 weeks. The proper way to use the gum is by “chewing and parking.” Patients should be instructed to chew the gum until they feel a tingling in their mouth, then “park” the gum between cheek and gums for one minute then chew again, repeating these steps for 30 minutes.²

Nicotine patches: The nicotine patch delivers nicotine through the skin. Nicotine patches come in three strengths, and these are dosed according to how much nicotine is delivered over 24 hours: 7mg (low strength), 14mg (medium strength), 21mg (high strength). The strength depends on how many cigarettes are smoked per day.

Nicotine lozenges: Lozenges dissolve in a person's mouth like hard candy. If someone smokes their first cigarette within 30 minutes of waking up in the morning, they should use the 4-mg nicotine lozenges. If they smoke their first cigarette more than 30 minutes after waking up, they should use the 2 mg-nicotine lozenges. For weeks 1 to 6 of treatment, you should use one lozenge every 1 to 2 hours. Using at least nine lozenges per day will increase your chance of quitting. For weeks 7 to 9, you should use one lozenge every 2 to 4 hours. For weeks 10 to 12, you should use one lozenge every 4 to 8 hours.

Prescription options: There are also options available through a healthcare provider: varenicline tablets (Chantix®), bupropion tablets (Wellbutrin®), nicotine nasal spray, and nicotine inhaler.¹

Is vaping healthier than smoking? More than 3.6 million young people in the United States use e-cigarettes.¹ The American Lung Association states that ingredients found in e-cigarettes (such as vitamin E acetate and propylene glycol) may expose people to high levels of toxins, which can cause irreversible lung damage and lung diseases.³ The Food and Drug Administration has not found any e-cigarette to be safe and effective in helping smokers quit.

Support at The Valley Hospital: A free, weekly support group meeting is offered to our community. This may include free over-the-counter smoking cessation aides mentioned above. The counseling group meets once a week every Wednesday from 5 pm to 6:30 pm in 6 - week sessions. Patients can re-register after 6 weeks if they wish to continue to participate. Call 201-447-8673 for more information or visit <https://www.valleyhealth.com/services/smoking-cessation>

References: **1.** “Fast Facts.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 21 May 2020, [www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm#:~:text=Cigarette%20smoking%20is%20responsible%20for,or%201%2C300%20deaths%20every%20day.&text=On%20average%2C%20smokers%20die%2010%20years%20earlier%20than%20nonsmokers](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm#:~:text=Cigarette%20smoking%20is%20responsible%20for,or%201%2C300%20deaths%20every%20day.&text=On%20average%2C%20smokers%20die%2010%20years%20earlier%20than%20nonsmokers.). **2.** How to use nicotine gum. https://www.nicorette.com/about-nicorette/how-to-use-nicorette-gum.html?gclid=CjwKCAjwSp_8BRBUeiwAPpJO6yxOpdzrvb2OL_oRGFuGDTxg2QUW59vQPb2iGkKjhW6G40wwwKBYYhoCqvKQAvD_BwE&gclid=aw.ds#nr-rd-chew-method accessed Oct. 15, 2020. **3.** “E-Cigarettes and Lung Health.” American Lung Association, www.lung.org/quit-smoking/e-cigarettes-vaping/lung-health accessed June 2, 2020.

Tips for drug patches

Ralph Fleurant, FDU PharmD Candidate 2021

Many medications are formulated as patches, which are also known as transdermal delivery systems (TDS).

Patches may offer the following benefits:

- better bioavailability
- controlled release of medication
- swallowing & gastrointestinal tract absorption is not required

Types of patch formulations range from passive systems, where a single drug substance is dissolved in a single adhesive, or patches can be highly complex, multi-component, multi-adhesive, multi-laminate matrices.

Another key aspect that manufacturers must consider for TDS is In Vitro Permeation Test (IVPT) using excised human skin. IVPT is utilized to evaluate the rate and extent of transdermal drug delivery in humans. Differences in drug characteristics and patch drug delivery systems make **different patches have different characteristics, application sites, and administration techniques.**¹

Considerations when applying patches include:

- condition of the skin prior to application
- if the patch can be cut
- how often to apply a new patch
- how long to leave the patch on & off
- where on the body to apply the patch

Table 1 on page 6 summarizes commonly used patches at The Valley Hospital. If you have questions, please reach out to your pharmacist.

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Formulary update

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Enfortumab vedotin-ejfv (Padcev®)

Enfortumab vedotin-ejfv is an antibody drug conjugate with a NECTIN4 antibody with an attached microtubule inhibitor conjugate. Indicated for the treatment of patients with locally advanced or metastatic urothelial cancer previously treated with a PD-1 or a PDL-1 inhibitor and a platinum-based therapy. Dosed 1.25 mg/kg IVPB on days 1, 8, 15 of a 28-day cycle. **Restricted to Luckow Pavilion.**

Crizanlizumab-tmca (Adakveo®)

Crizanlizumab-tmca is a monoclonal antibody with affinity to P-selectin and blocks interaction with p-selectin glycoprotein ligand I. It is used to reduce the frequency of vaso-occlusive crises in patients with sickle cell anemia. Dosed 5 mg/kg IVPB on week 0, week 2 and every 4 weeks afterwards. **Restricted to Luckow Pavilion.**

Fam-trastuzumab deruxtecan-nxki (Enhertu®)

Fam-trastuzumab deruxtecan-nxki is a HER-2 directed monoclonal antibody drug conjugate with an attached topoisomerase inhibitor. It is used in patients with unresectable or metastatic HER-2 positive breast cancer who have received 2 or more lines of therapy. Due to the risk of congestive heart failure, left ventricular ejection fraction should be monitored during therapy. Dosed 5.4 mg/kg IVPB every 21 days. **Restricted to Luckow Pavilion.**

Luspatercept-aamt (Reblozyl®)

Luspatercept-aamt is an erythroid maturation agent used to treat anemia in patients with beta thalassemia or in patients with very low to intermediate risk myelodysplastic syndrome with ring sideroblasts. Dosed 1 mg/kg SQ every 21 days. **Restricted to Luckow Pavilion.**

Tagraxofusp-erzs (Elzonris®)

This is FDA-approved for blastic plasmacytoid dendritic cell neoplasm (BPDCN). **Restricted to Luckow Pavilion.**

Isatuximab-irfc (Sarclisa®)

This is FDA-approved for relapsed or refractory multiple myeloma. **Restricted to Luckow Pavilion.**

Givosiran (Givlaari®)

This is FDA-approved for acute hepatic porphyria. **RESTRICTED to LUCKOW.**

Melatonin

This formulary medication will be automatically dosed by pharmacists to round to the nearest 3 mg strength. This will eliminate phone calls to prescribers for dosage clarifications.

Pharmacy Happenings

David Turberville, PharmD, BCOP, Oncology Pharmacy Clinical Coordinator, was acknowledged by Director of Patient Safety, Michael Mutter, RPh, for using the HRO tool “Validate and Verify.” David’s dedication to patient care and safety assures patients receive optimal chemotherapy.



Pharmacist immunizers participated in The Valley Hospital Employee Health & Wellness Peer-Immunizer program for flu shots. Joanne Son, PharmD, Barbara Abboud, PharmD, Ray Hawash, PharmD, and Amanda Maciag, PharmD, immunized department members with support from Maria Leibfried, PharmD, Neha Siddiqui, PharmD, and Erin Tully, BS.



Pharmacy staff and students decorated the display case in Phillips 1 to celebrate the Pharmacy Department. Their creativity highlighted staff members and services during COVID19 and beyond!



Pharmacy week Oct. 18-24, 2020

Thank you to our pharmacists, pharmacy technicians and support staff for doing what you do every day to contribute to the healthcare team!