



## VELscope Vx Step-By-Step Examination Guide

Note: This is an abbreviated clinical guide. Please see the VELscope Vx training materials for more detailed information.

1. Review the patient's relevant medical and dental history.
2. Conduct a thorough extra-oral and intra-oral examination both visually and manually, palpating all the structures of the head and neck.
3. Repeat the intra-oral examination using the VELscope Vx by viewing the oral cavity through the VELscope Handpiece (Figure 1). Maintain a distance of approximately 3-4 inches from tissue to optimize the visualization of the natural tissue fluorescence. It is important NOT to view the tissue with the Handpiece too close to the tissue (see Operation Manual / Quick Reference Guide) – maintain a distance of at least 3 inches.
4. Abnormal tissue typically appears as an irregular, dark area that stands out against the otherwise normal, green fluorescence pattern of surrounding healthy tissue.
5. If a suspicious area is discovered, reevaluate under white light and VELscope trying to identify what might have caused the region to appear abnormal. Take into consideration its appearance under both VELscope and white light, its response to palpation, and salient patient history information.
6. Photo-document any areas of concern both under white light and through the VELscope Vx.
7. Record all relevant findings. Documentation forms are available at [www.velscope.com](http://www.velscope.com).
8. Inform the patient of all relevant findings and the appropriate course of action.
9. Follow up or refer as appropriate.

### Contraindication:

Patients with a history of photosensitivity or those using photosensitive medications should not be exposed to the light emitted from the VELscope device.

### Caution:

All patients should wear protective eyewear provided to minimize discomfort and the potential for risk of eye injury.

### Adverse Effects:

On rare occasions patients may experience temporary discomfort after exposure to the blue light emitted by the VELscope Vx system, including dry mouth, a burning sensation in the mouth or lips, and/or perceived loss of ability to taste. A patient presenting any of these symptoms should be evaluated by his/her physician and should abstain from further examinations with the VELscope Vx system.

### Blanching

- Observe the suspicious, typically darker, area through the VELscope Handpiece while applying a light amount of pressure with the back side of an explorer or similar instrument in a sweeping motion to diffuse any blood from the area.
- If the normal green fluorescence returns with this pressure, then the lesion may have an inflammatory component.
- For some important considerations when interpreting the effects of blanching, see the VELscope Vx training materials.

- If the suspicious area has not cleared up after this follow-up time, use your clinical judgement and proceed with further investigation according to the regular standard of care (e.g. referral to a specialist, etc.)

### Surgical Biopsy – The Gold Standard

- Remember: the gold standard for diagnosing lesions (including precancer and cancer) in the soft tissues of the oral cavity is surgical biopsy.
- A biopsy showing dysplasia that is not cancer is NOT a “false positive”; discovering lesions, ALL lesions, early in the disease development process allows for the highest probability of a minimally invasive treatment and favorable treatment outcome.

### Follow-Up

- If a suspicious area cannot be ruled out as benign, it is usually appropriate to attempt to remove the presumed causative agent and perform a follow-up examination (typically in 2 weeks).
- At this time, evaluate whether the suspicious area has changed, especially if the presumed causative agent has been removed.

For more information,  
contact your dealer or visit  
[velscope.com](http://velscope.com)

**LED Dental Inc.**  
580 Hornby St, Suite 780  
Vancouver, BC, Canada V6C 3B6

**North American Toll Free: +1 888 541 4614**  
Tel: +1 604 434 4614 Fax: +1 604 434 4612

© Copyright 2020, LED Dental, Inc. All rights reserved. LED 0250 Rev G (2020-03-16)

EC	REP	<b>Obelis s.a</b> Bd. Général Wahis 53 1030 Brussels, BELGIUM Tel: +(32) 2.732.59.54 Fax: +(32) 2.732.60.03 E-Mail: <a href="mailto:mail@obelis.net">mail@obelis.net</a>
----	-----	---

# VELscope Vx Step-By-Step Examination Guide



## Fluorescence Visualization in the “Normal” Mouth

- Understand what a normal oral cavity looks like under VELscope to best appreciate what may be abnormal.
- The attached gingiva and anterior tonsillar pillars, for example, often have a naturally darker appearance.
- Pigmented tissue appearing dark under white light usually also looks dark under VELscope Vx.
- Lymphoid tissue such as tonsillar tissue and lymphoid aggregates (typically in the oropharynx) will appear dark under fluorescence.
- Inflammation typically appears darker under VELscope due to the excess blood content.
- The oral cavity is naturally exposed to varying degrees of chronic irritation and mild inflammation.
- Due to inflammation, the buccal mucosa, lateral surfaces of the tongue and hard palate may sometimes show darker areas typically characterized by poorly-defined borders.

- Hyperkeratosis may sometimes appear bright under VELscope because of keratin fluorescence. Note that sometimes hyperkeratosis may be associated with inflammation; in these cases, you should expect a loss of fluorescence from those areas showing an inflammatory response.

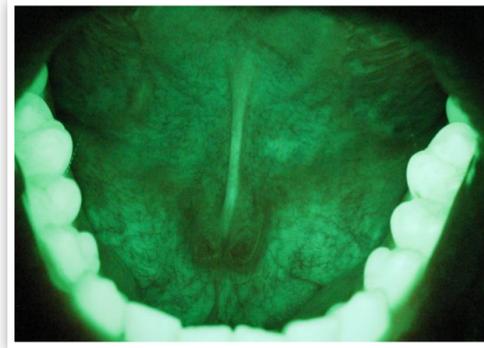
## Characteristics That Increase Suspicion of Abnormal Tissue Warranting Follow-Up

- Highly darkened appearance—strong loss of fluorescence
- High-risk location (e.g. for tobacco-related oral cancer – lateral/ventral border, floor of the mouth, etc.)
- Unilateral as opposed to bilateral presentation
- Asymmetry and/or irregular shape
- Extension over more than one kind of oral structure
- A fluorescence response that is unexpected or not explainable based on the clinical presentation under white light.



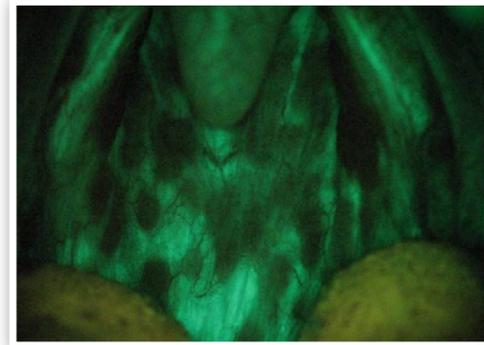
Figure 1. VELscope Vx examination: The clinician shines the blue excitation light into the patient's oral cavity and looks through the VELscope Handpiece.

Figure 2. Representative examples of the appearance of healthy vs. suspicious oral tissue under both incandescent light and VELscope examination.



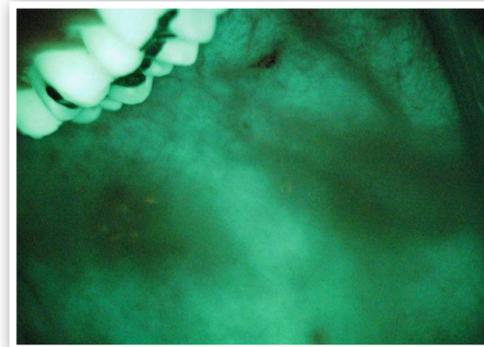
### Normal Floor of the Mouth

Sometimes the area around the sub-lingual gland can be well vascularized, and can lead to a variable degree of loss of fluorescence.



### Normal Variation – Oropharynx with Numerous Lymphoid Aggregates

Sometimes the oropharynx can host varying numbers of lymphoid aggregates, which, due to tissue structure, display a pronounced loss of fluorescence.



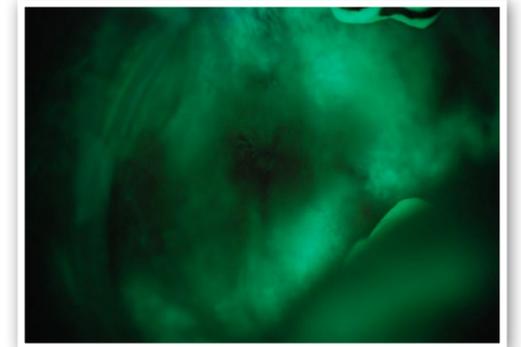
### Irritation and Inflammation

The buccal mucosa is a common site for irritation and consequent inflammation; inflammation always shows a distinct loss of fluorescence because of increased blood content. (Image courtesy of the University of Washington Oral Medicine Program.)



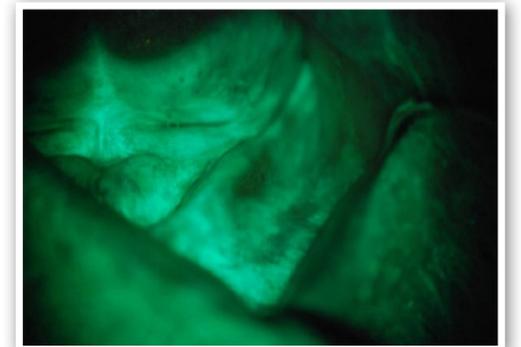
### Pigmented Lesions: Amalgam Tattoo

Pigmented lesions show a loss of fluorescence for the same reason that they appear pigmented under white light: absorption of light by the pigment. One should expect the size and shape of the loss of fluorescence to be the same as the size and shape of the pigmented area under white light. (Image courtesy of the University of Washington Oral Medicine Program.)



### Erosive Lichen Planus

The intense inflammation associated with erosive lichen planus results in a pronounced loss of fluorescence. (Image courtesy of the University of Washington Oral Medicine Program.)



### Dysplasia

The hyperkeratotic area on the ridge is in fact dysplasia, and shows a strong loss of fluorescence despite the presence of the fluorescent keratin. (Image courtesy of the University of Washington Oral Medicine Program.)