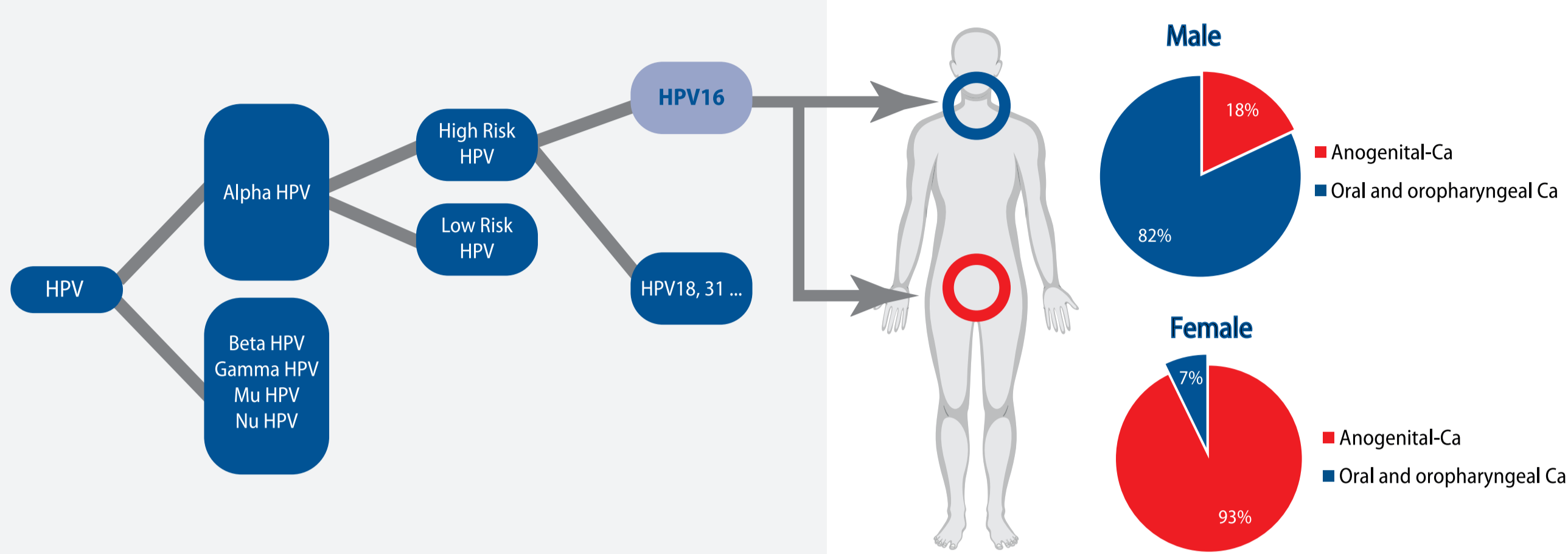


HPV16 INDUCED ORAL AND OROPHARYNGEAL CANCER

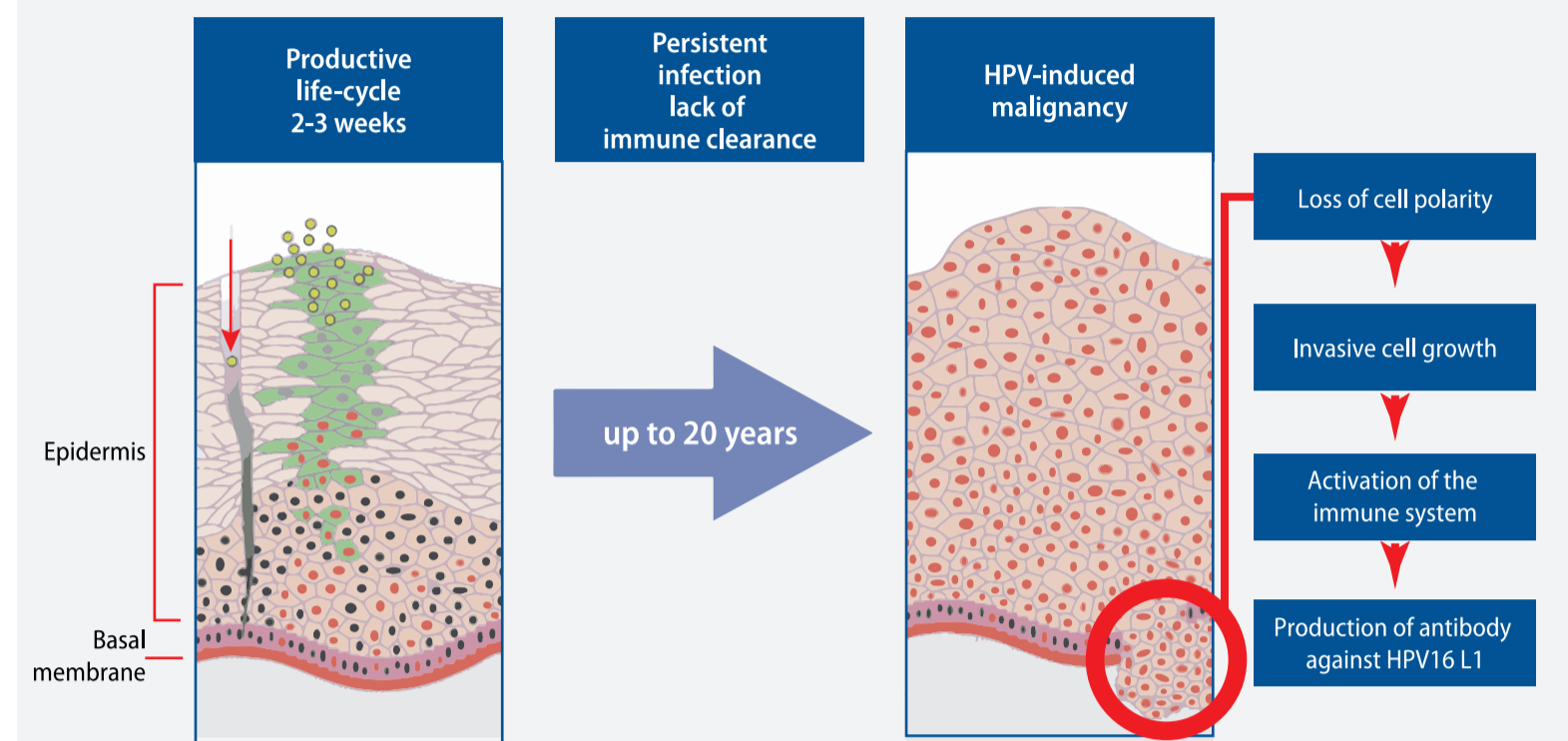
Pathogenesis



More than 120 types of Human Papilloma Virus (HPV) are known to affect the skin and mucous membranes. In particular, the αHPV types act as pathogens that infiltrate the mucous membranes. The most common HPV type found in tumours of the oral cavity, and in particular in the oropharyngeal region, is the oncogenic HPV16.

HPV16 particularly affects the mucous membranes of the pharyngeal region as well as the anogenital region. HPV16-associated tumours give rise to a high percentage of:

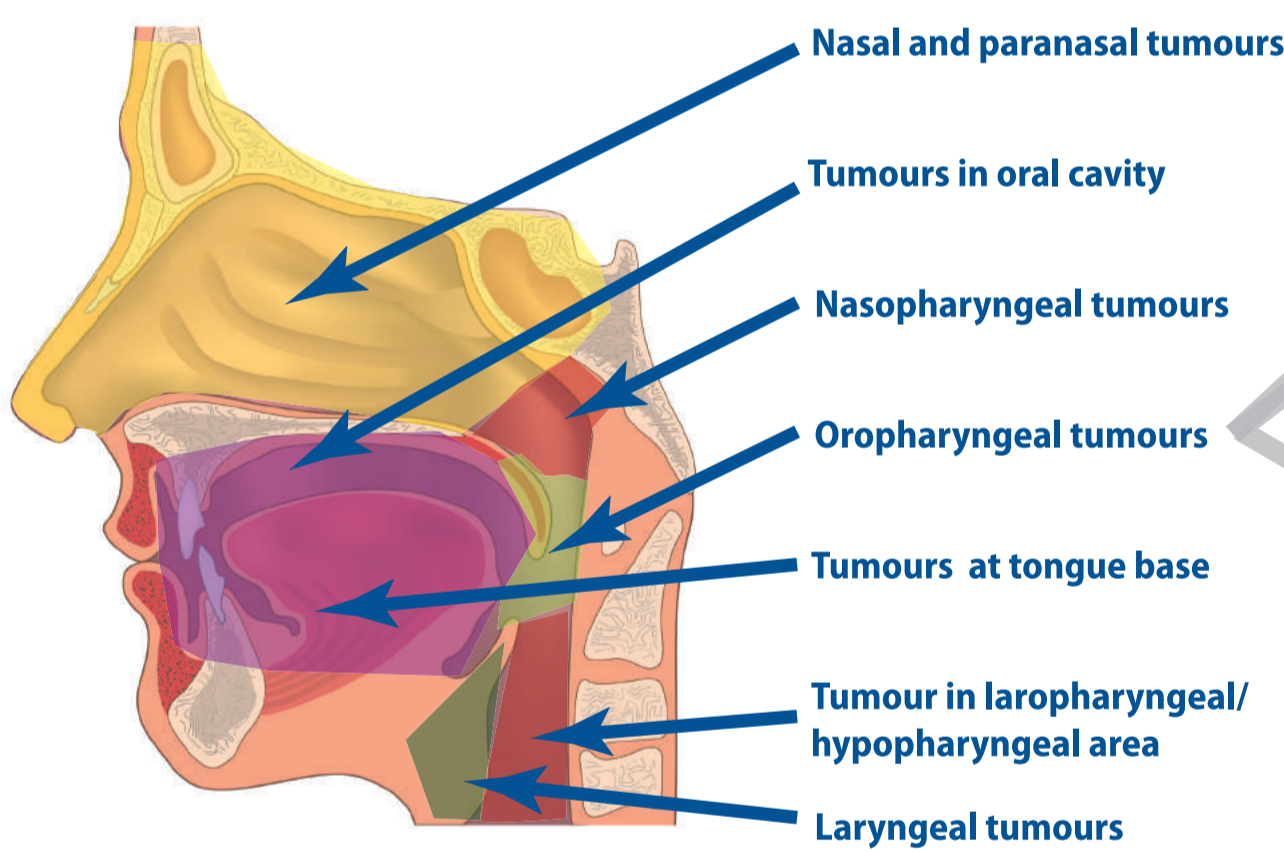
- Oropharyngeal carcinoma
- Laryngeal carcinoma
- Cervical carcinoma
- Anal carcinoma
- Vulvar and vaginal carcinoma
- Testicular and penile carcinoma



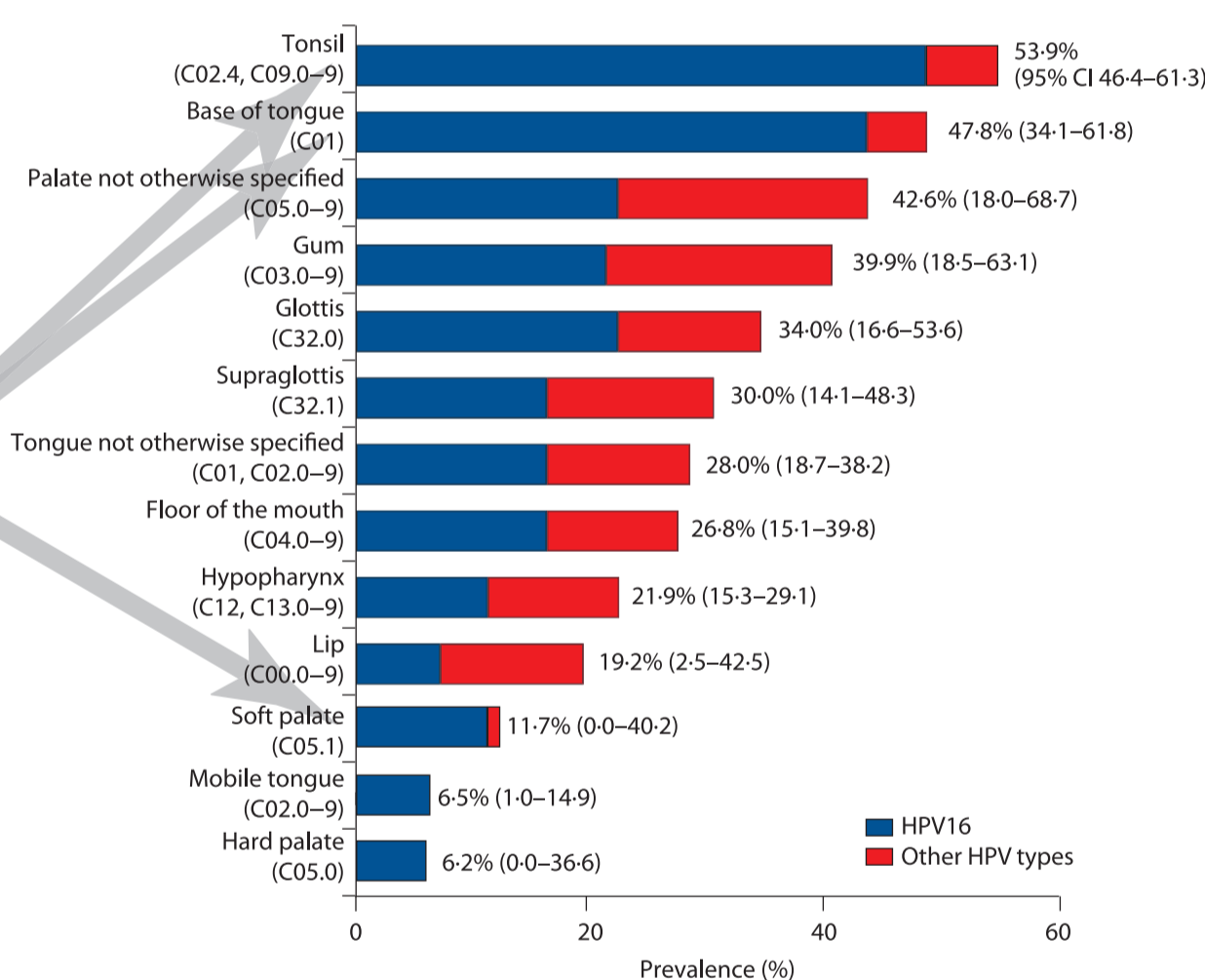
HPV16 infects the basal layer of the mucous membrane by way of microlesions, and infection can persist for years. In most cases, the infection disappears by itself. The longer HPV16 persists in the lower epidermal area, the higher is the risk for the initiation of malignancy. Once a pre-cancerous cell growth starts, the immune system begins to produce highly specific anti-HPV16 L1 antibodies.¹

Localizations and Prevalences

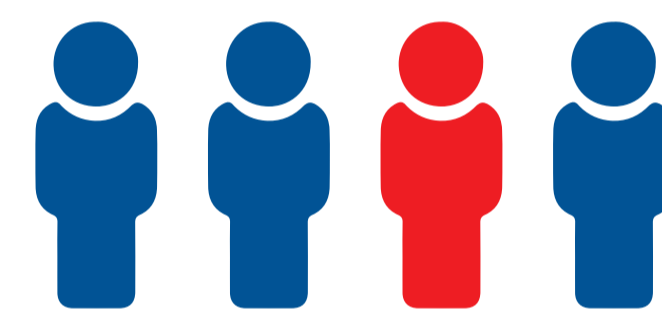
Possible tumour sites in the oral and pharyngeal area



Prevalence of HPV16 in HPV-positive cancer²



Risk Factors



- Anal sex
- Oral sex
- Sexual promiscuity
- Immune deficiencies, such as HIV
- Immunosuppression
- Immune disorders
- Combination of extensive tobacco, alcohol or drug use with HPV16 infection

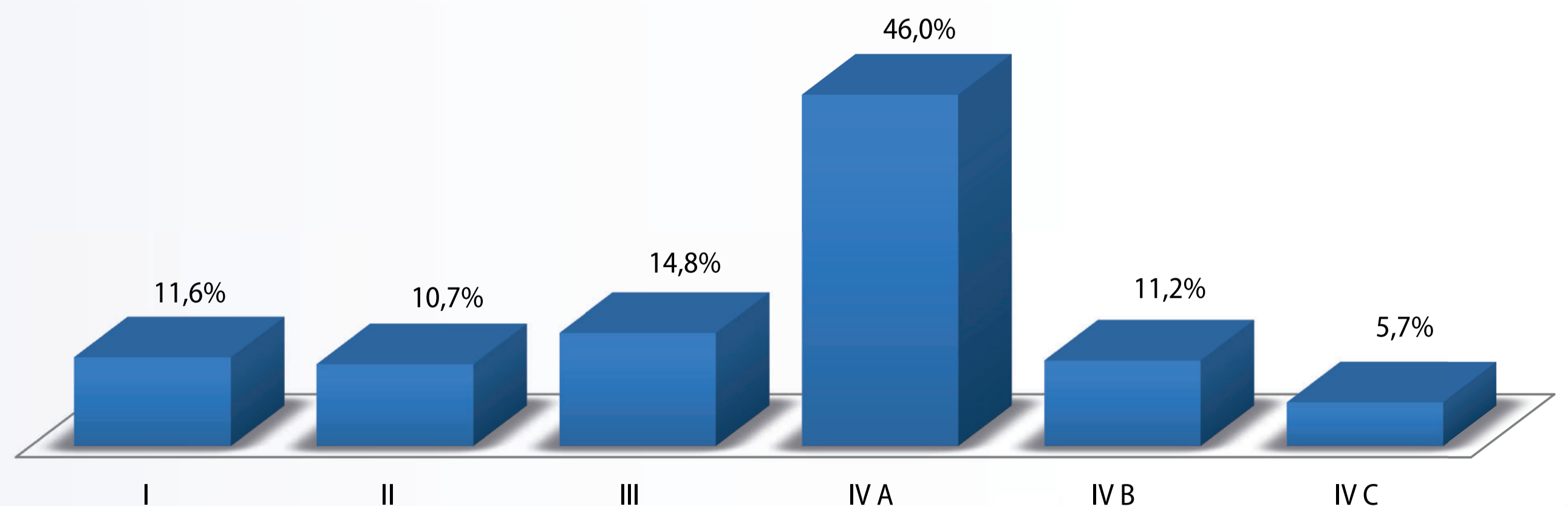
Symptoms and Staging

Symptoms

- Swellings in the throat or wounds that persist for more than 2 weeks
- Red or white spots in the mouth
- Non-painful lumps or swellings in the throat
- Prolonged sore throat
- Prolonged hoarseness for over three weeks and change in voice
- Pain or difficulty in chewing or swallowing, or in moving the jaw or tongue
- Pain while speaking
- Lumpy feeling in the area of the base of the mouth or tongue
- Prolonged bad breath not due to lack of oral hygiene
- Blood in the saliva or bloody mucus when coughing
- Loosening of the teeth, or dental prosthesis no longer fits

The symptoms listed above typically occur very late or once the tumour is invasive.

Common cancer stages findings at the time of the initial diagnosis of oral and oropharyngeal cancer³



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Abviris Deutschland GmbH is actively committed to the earlier diagnosis of HPV16 induced tumours resulting in better treatment success.

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 1) Adapted from Doorbar (2006), Doorbar J.: Molecular biology of human papillomavirus infection and cervical cancer, Clin Sci (Lond.), 2006 May;110(5):525-41.
 2) Ndiaye C, Mena M, Alemamy L, Arbyn M, Castellsague X, Laporte L, Bosch FX, de Sanjose S, Trottier H: PV DNA, E6/E7 mRNA, and p16INK4a detection in head and neck cancers: a systematic review and meta-analysis, H. Lancet Oncol 2014;15:1319-1331.
 3) Gaertner L-M. Prävalenz und klinischer Verlauf von Mundhöhlen- und Oropharynxkarzinomen von 1993 bis 2009 im Spiegel veränderter Therapie-Algorithmen. Dissertation zur Erlangung des akademischen Grades Dr. med. an der Medizinischen Fakultät der Universität Leipzig. Betreuer: Prof. Dr. med. A. Dietz, Dr. med. A. Boehm. Veröffentlichung: 14. 07. 2016; als PDF unter: <http://nbn-resolving.org/urn:nbn:de:bsz:15-qucosa-206871> am 30.11. 2017.