Recommendations for improving the quality of care for patients with bronchial asthma

DMP Asthma Position Paper with Recommendations for Action

The Bronchial Asthma Disease Management Programme (DMP), as a structured treatment programme in accordance with Section 137f of the German Social Code, Book V (SGB V), aims to provide patients with bronchial asthma with coordinated treatment based on the latest medical research (Joint Federal Committee 2025a). Disease management programmes such as the DMP Asthma base their guidelines on existing clinical treatment guidelines (Joint Federal Committee 2025b). As these are subject to constant updates, there may be a discrepancy between the DMP guidelines and the current recommendations of the clinical guidelines. For example, the National Care Guideline for Asthma (NVL Asthma) emphasises the need for stepwise allergological diagnostics for all patients with asthma in order to optimally understand asthma symptoms and treat them causally (German Medical Association 2024). In contrast, this allergological diagnosis (and even the complete guideline-based phenotyping of patients) is missing from the existing DMP Asthma. This can lead to a deterioration in the quality of care, even though up to 79% of children with asthma and up to 60% of all adults with asthma have allergic asthma, which requires appropriate treatment (Agache et al. 2019). This statement proposes specific improvements to bring the DMP Asthma into line with the current state of scientific knowledge and to sustainably improve the quality of care for patients with bronchial asthma.

1. A holistic diagnostic approach incorporating phenotyping is essential

1.1. Patient phenotyping using biomarkers

>> Modern and targeted asthma therapy requires the phenotyping of patients. According to the NVL Asthma, this allows for individual disease courses and the resulting implications to be taken into account in the choice of therapy, and enables the identification of specific comorbidities as well as risk factors for severe forms of the disease (German Medical Association 2024). Phenotyping forms the basis of all modern personalised asthma therapy. Only when it is clear which asthma phenotype (allergic or intrinsic) is present can the optimal therapy be selected. Without this differentiation, there is a risk of under- or overtreatment and unnecessary costs.

As shown in Figure 1, the choice of treatment depends crucially on the specific type of asthma and the severity of the condition (Fig. 1).

The DMP neglects this important intermediate step, thereby making individualised, targeted treatment impossible. The diagnosis of asthma should therefore be supplemented by explicitly incorporating individual patient phenotyping. According to the NVL Asthma and the specialist asthma guideline (S2k), this includes stepwise allergological diagnostics (German Medical Association 2024; German Society of Pneumology 2023) as well as, according to the specialist asthma guideline (S2k), the

determination of eosinophils, the assessment of the age at first manifestation and the measurement of exhaled nitric oxide (FeNO) (German Society of Pneumology 2023).

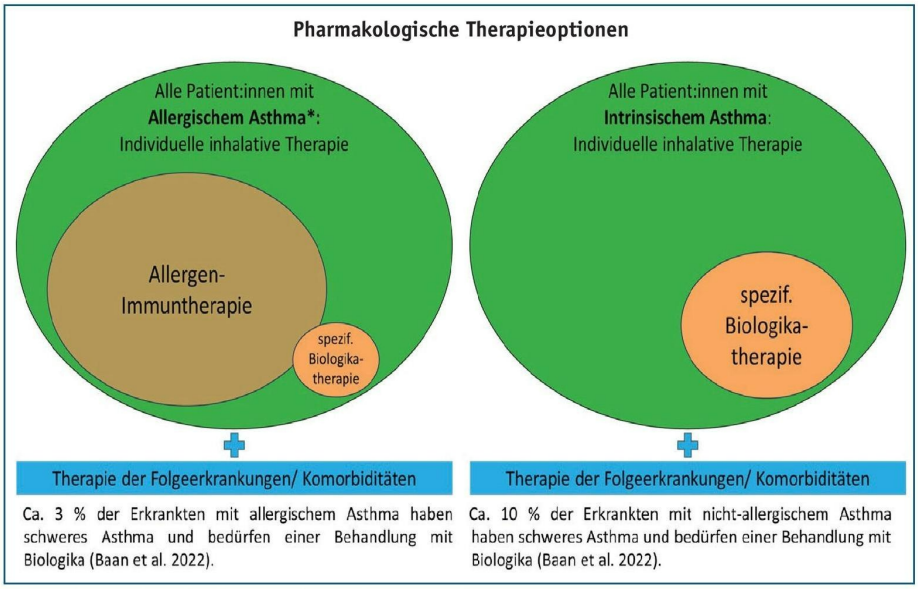


Fig. 1: **Pharmacological treatment options. Own illustration.**

Recommendation:

Inclusion of asthma phenotyping in the diagnostic criteria (Section 1.2) of the DMP Bronchial Asthma.

1.2 Implementation of mandatory stepwise allergological diagnostics in accordance with the NVL Asthma

An allergic disease is the most strongly identified predisposing factor for the development of bronchial asthma to date. Up to 79% of all children with asthma and up to 60% of affected adults suffer from allergic asthma (Agache et al. 2019). Consequently, for the majority of patients with asthma, appropriate allergy diagnostics represent a crucial step in successful asthma management. Allergy stepwise diagnostics, through precise allergen identification, enable targeted treatment with allergen immunotherapy (AIT), which (alongside potential allergen avoidance) is the only causal treatment option for allergic asthma. This approach not only contributes to the goal of symptom control and disease remission, but also complies with the NVL Asthma (German Medical Association 2024), the national specialist guideline (German Society of Pneumology 2023) and international recommendations (Polverino et al. 2017; Global Initiative for Asthma 2023). AIT thus helps, in the interests of the solidarity-based community, to avoid direct and indirect asthma-related costs.

Request:

Mandatory stepwise allergological diagnosis (Section 1.2.3) in accordance with the current National Asthma Care Guideline,including mandatory initial documentation of the diagnosis (Appendix 10) in the Bronchial Asthma Management Programme (Fig. 2).



Fig. 2: **Clinical algorithm for the treatment of asthma patients, depending on their asthma phenotype. Own illustration, based on Lommatzsch et al. 2025.**

2. Cost comparison of secondary preventive treatment of allergic rhinitis (AR) with AIT and guideline-based therapy for moderate or severe allergic asthma (AA) in adults

Current research shows that AIT can preventively reduce the risk of developing asthma (Farraia et al. 2022). In addition to preventing the onset of asthma, its long-term effects include improved asthma control and the potential to induce lasting remission of the disease. These effects are accompanied by long-term cost savings.

In patients with existing asthma, AIT can improve asthma control and significantly reduce the risk of asthma exacerbations. In a three-year follow-up after treatment with AIT, Woehlk et al. (2022) found an average reduction in the frequency of exacerbations of 74% for seasonal allergic asthma and 57% for perennial allergic asthma ($p<0.001$ in both cases). The authors were also able to demonstrate a protective effect of AIT on the development of lower respiratory tract infections (mean risk reduction of 17% and 20% for allergic asthma, respectively).

To illustrate this, a comparison of the annual treatment costs (ATC) of AIT and conventional asthma therapy for allergic asthma (AA) of varying severity can be used (see Fig. 3). The calculation is based on the methodology of Brehmer et al. (2023) and highlights not only the clinical benefits but also the economic aspects of the treatment, whilst examining the appropriateness of AIT for this patient group, particularly in cases of controlled allergic asthma. For the cost calculation, patients were considered who cannot be adequately treated with inhaled corticosteroids (ICS) alone – approximately 80% of prescribed ICS are combination preparations (Ludwig et al. 2022; ABDATA Pharma-Daten-Service 2023).

In adults (≥18 years) , this corresponds to treatment levels 3 to 5 of the NVL Asthma guidelines. The basis for the cost calculation of AIT in this analysis is the preparation ACARIZAX®. The asthma treatment costs are based on NVL recommendations for long-term therapies, whereby preferred

combinations of the most commonly prescribed preparations according to the Drug Prescription Report (Ludwig et al.) were selected for each level; on-demand therapy was not taken into account. The annual treatment costs (ATC) were calculated from pharmacy retail prices or fixed amounts minus statutory discounts, cumulated over an observation period of 10 years, and analysed to determine when the costs of symptomatic asthma treatment exceed the expenditure for causal AIT (break-even analysis). Discount agreements and patient co-payments were not taken into account.

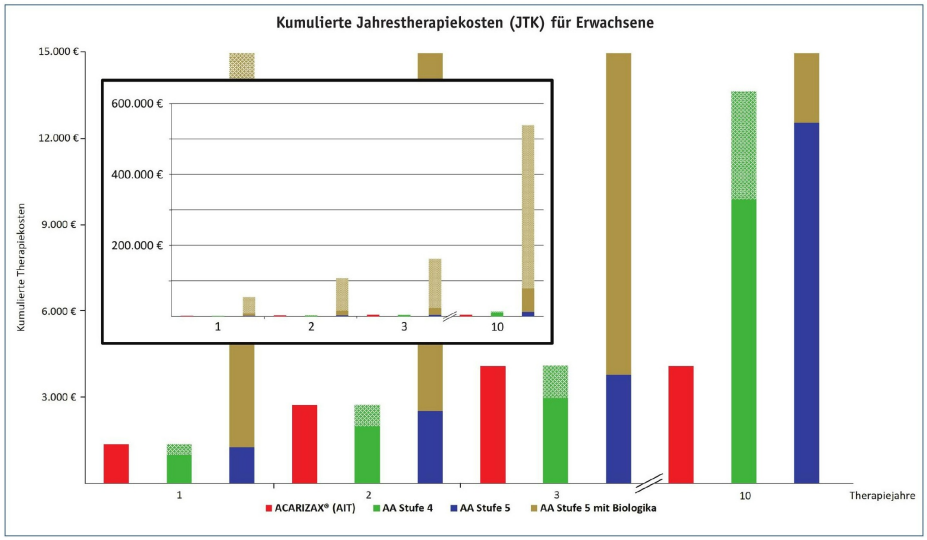


Fig. 3: **Cumulative annual treatment costs (CATC) for[adults1,2]. Legend: 1 = The comparator medication was selected based on the most frequently prescribed drug per drug class according to the Prescription Report; 2 = Solid bars show the minimum costs, while hatched bars indicate the range up to the maximum costs. Own illustration based on Brehmer et al. 2023.**

Result:

Causal treatments for allergic rhinitis (AR) can incur annual treatment costs of around 1,300 euros in adults. For example, the cost of immunotherapy with ACARIZAX® is approximately 1,360 euros per year. The annual treatment costs for allergic asthma (AA) according to step 3 of the asthma guidelines are €496 and up to €1,368 according to step 4. At stage 5, costs rise to up to €53,910 per year (including biologic therapies). The cumulative annual treatment costs for adults are shown in Figure 3. The higher the severity of asthma, the more likely the costs of AA treatment are to exceed those of AIT (break-even point). AA treatment in accordance with the NVL Asthma guidelines can already be more costly than AIT in Stage 4 after just one year of treatment. As soon as biologic therapy becomes necessary, costs are already higher than with AIT from the very first year of treatment. Consequently, in addition to the clinical benefits, there is also a cost advantage to using AIT over long-term AA therapy, particularly as causal therapy with AIT is only administered for a limited period (usually three years) (Fig. 3, Table 1).

Kumulierte Jahrestherapiekosten (JTK) für Erwachsene[1]					
NVL-Stufe		JTK in Euro 1. Jahr	JTK in Euro 2. Jahr	JTK in Euro 3. Jahr	JTK in Euro 10. Jahr
-	ACARIZAX® (AIT)	1.360	2.720	4.080	4.080
4		991 - 1.368	1.982 - 2.736	2.973 - 4.104	9.910 - 13.680
5		1.258	2.516	3.774	12.580
5 (inkl. Biologika)		7.839 – 53.910	15.678 – 107.820	23.517 – 161.730	78.390 – 539.100

Table 1: **Cumulative annual treatment costs (CATC) for adults1. Legend: 1 = The comparator medication is selected based on the most frequently prescribed drug per drug class according to the Prescription Report. Own illustration based on Brehmer et al. 2023**

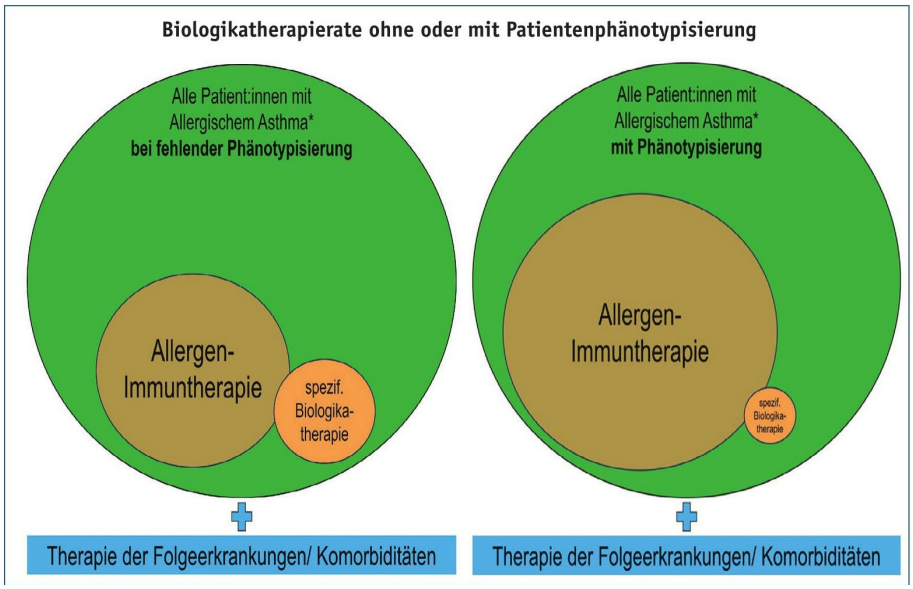


Fig. 4: **Biologic therapy rates with or without patient phenotyping. Legend: * = Allergen avoidance should be aimed for. Own illustration.**

For illustrative purposes, Figure 4 shows that early AIT, made possible by early phenotyping, reduces follow-up costs through an earlier start of treatment. This could reduce the current biologics treatment rate from around 3% (see Fig. 1) to approximately 1% (Fig. 4).

AIT is a sustainable investment in patients' health and thus not only contributes to improving patients' quality of life, but is also sensible from a health economics perspective and relieves the burden on the healthcare system in the long term (Fritzsching et al. 2024).

Call to action:

Patients with allergic asthma should not be denied the option of AIT, as, in addition to the clinical benefits (causal effect) of AIT, there is a cost advantage over long-term (symptomatic) treatment of AA.

3. Improve the relevance of documentation

Concrete and relevant documentation serves not only to ensure the traceability and quality assurance of the programme, but also to facilitate the evaluation of the therapy and interdisciplinary communication. The documentation within the framework of the Bronchial Asthma DMP should be adapted in terms of content so that irrelevant queries are omitted and, in return, therapy-relevant queries are added. A clear distinction must be

made between data to be collected once (e.g. phenotyping, allergy history) and data to be collected regularly (e.g. course of OIT). Intelligent adaptation can reduce the burden on doctors (German Respiratory Society).

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Request:

Revision of Appendix 10 of the DMP Bronchial Asthma to enable targeted documentation of relevant data. << by:

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Abstract

Introduction: The Disease Management Programme (DMP) for bronchial asthma exhibits significant deviations from current national and international guidelines. In particular, there is a lack of guideline-compliant patient phenotyping, including mandatory stepwise allergological diagnostics. The aim is to adapt the DMP to the current state of scientific knowledge.

Methods: The study is based on a substantive evaluation of the existing DMP in comparison with current scientific requirements and guideline recommendations.

Results: Deficiencies are evident in phenotyping, allergological diagnostics and the integration of biomarkers, as well as in targeted documentation. Consequently, personalised therapies, including causal allergen immunotherapy (AIT), have not yet been utilised optimally.

Discussion: Adapting the DMP by integrating biomarkers, structured allergy diagnostics and improved documentation can promote personalised therapies, enhance the quality of care and reduce costs in the medium term.

Keywords

Bronchial asthma, Disease Management Programme (DMP), stepwise allergy diagnostics, patient phenotyping, allergen immunotherapy (AIT)

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