Überblick Kongressteilnahmen

2016		
	Deutscher Krebskongress (DKK), Berlin	Vortrag, Posterpräsentation
	Jahrestagung der Deutschen Gesellschaft für Klinische Pharmazie (DGKPha), München	Posterpräsentation
	Annual Conference of the International Society of Geriatric Oncology (SIOG), Mailand	Posterpräsentation
2017		
	Quality of Cancer Care Kongress (QoCC), Berlin	Posterpräsentation
	Jahreskongress der Deutschen Gesellschaft für Geriatrie (DGG), Frankfurt	Posterpräsentation
	Jahreskongress der Europäischen Gesellschaft für Klinische Pharmazie (ESCP), Heidelberg	Vortrag, Posterpräsentation
2018		
	Wissenschaftsforum Geriatrie (WfG), Berlin	Vortrag
	Deutscher Krebskongress (DKK), Berlin	Posterpräsentation

Preise

Posterpreis der Deutschen Gesellschaft für Klinische Pharmazie bei der DGKPha Jahrestagung 2016

Deutscher Krebskongress 2016, Berlin

Interdisciplinary screening and assessment for establishing age-adapted therapy concepts in elderly cancer patients

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Objectives

The aim of this study is to improve therapy decisions in elderly cancer patients by implementing an onco-geriatric assessment which is able to predict chemotherapy-associated toxicity in this patient group.

Methods

Two possible tools are published for toxicity prediction in elderly cancer patients: the CARG score (Cancer and Ageing Research Group) and the CRASH score (Chemotherapy Risk Assessment Scale for High-Age Patients). They combine different geriatric and oncological parameters and stratify patients into different risk categories of chemotherapy-related toxicity. In a pilot study we tested the feasibility of both scores by evaluating the necessary time for patient interviews, as well as physicians' therapy decisions and patient-reported symptoms (PRO-CTCAE).

Results

In the pilot study we recruited n=20 elderly cancer patients (≥ 70 years). The results indicate that the interview of the CARG score can be performed much faster than the one of the CRASH score (mean 3.3 min vs. 27.1 min). Besides, the results of both scores differ from the physician's assessment by predicting a higher chemotherapy-associated toxicity (CRASH Combined Score 10% vs. CARG 15% vs. Physicians 90%). The correlation between patient-reported toxicity and the scores' or physicians' predictions remains to be further analyzed.

Conclusion

The pilot study indicates the potential of an oncogeriatric assessment to improve therapeutic decisions for cancer therapy in the elderly. However, it is essential to further evaluate which of the two scores predicts chemotherapy-associated toxicity best.

Jahrestagung der Deutschen Gesellschaft für Klinische Pharmazie 2016, München

Evaluierung onko-geriatrischer Score-Systeme zur Vorhersage therapie-assoziierter Toxizität bei älteren Krebspatienten

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Hintergrund

Durch individuelle physiologische Veränderungen und Faktoren wie Komorbidität oder Polymedikation, ist es bei älteren Patienten besonders schwierig, die geeignete medikamentöse Krebstherapie zu finden. In den letzten Jahren wurden daher zur Einschätzung des Therapierisikos älterer Krebspatienten zwei Score-Systeme entwickelt: der CARG-Score (Cancer and Ageing Research Group) [1] und der CRASH-Score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2]. In der klinischen Praxis wurden diese jedoch bisher nicht ausreichend evaluiert.

Zielsetzung

Unser Ziel ist es diese onko-geriatrischen Score-Systeme im klinischen Alltag hinsichtlich ihrer Anwendbarkeit und Vorhersagekraft zu untersuchen.

Methoden

Der CARG- und CRASH-Score kombinieren verschiedene geriatrische, sowie onkologische Parameter und stufen den Patienten in eine Risikogruppe für das Auftreten von therapie-assoziierter Toxizität ein. In unserer Pilotstudie wurden Krebspatienten ≥70 Jahre vor Therapiebeginn rekrutiert und der CRASH- und CARG-Score erhoben. Die Score-Ergebnisse wurden untereinander, sowie mit der Therapieeinschätzung des Arztes verglichen. Außerdem wurde die benötige Zeit zur Durchführung der Score-Systeme erhoben.

Ergebnisse

In die Pilotstudie wurden 20 Patienten eingeschlossen. Der CRASH-Score (kombinierter Score) ordnete 10% und der CARG-Score 15% der Patienten in die Patientengruppe mit geringerem Risiko ein, der Arzt dagegen 90% der Patienten. Weiterhin unterschieden sich die einzelnen Vorhersagen der Score-Systeme teilweise deutlich voneinander. Der CARG-Score war zudem weniger zeitaufwändig als der CRASH- Score (durchschnittlich 3.3 min versus 27.1 min).

Zusammenfassung

Die onko-geriatrischen Score-Systeme CRASH und CARG sind im klinischen Alltag durchführbar und besitzen das Potential, die Therapieentscheidung bei älteren Krebspatienten durch ein onko-geriatrisches Assessment zu unterstützen. Welcher Score die therapie-assoziierte Toxizität besser vorhersagt, wird momentan anhand einer größeren Patientenzahl am Johanniter-Krankenhaus Bonn evaluiert.

Literatur

[1] Hurria A et al. Predicting chemotherapy toxicity in older adults with cancer: a prospective multicenter study. J Clin Oncol 2011; 29:3457-65.

[2] Extermann M et al. Predicting the risk of chemotherapy toxicity in older patients: the Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) Score. Cancer 2012; 118:3377-86.

Annual Conference of the International Society of Geriatric Oncology 2016, Mailand

Evaluation of two onco-geriatric score systems for prediction of therapy-associated toxicity in elderly cancer patients

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Introduction

Decisions on the treatment of elderly cancer patients are particularly challenging due to high inter-individual variability of co-morbidity and frailty, as well as age-associated physiological alterations. Therefore, a tool for supporting and guiding individual onco-geriatric benefit-risk assessments could be valuable in the treatment of these patients. Two promising score systems for predicting chemotherapy-associated toxicity in elderly cancer patients were recently developed. However, they have not been broadly used in clinical routine so far.

Objectives

We aim at profoundly assessing both published onco-geriatric score systems for clinical use in the future. First, our goal was to assess the feasibility and potential of the two score systems in a pilot study. Our next step will be the comparison of both scores regarding their predictive performance of therapy risks.

Methods

The two possible tools for toxicity prediction in elderly cancer patients are the CARG score (Cancer and Ageing Research Group [1]) and the CRASH score (Chemotherapy Risk Assessment Scale for High-Age Patients [2]). They combine different geriatric and oncological parameters (for instance functional abilities or treatment modalities) and stratify patients into different risk categories regarding chemotherapy-related toxicity. In the pilot study we recruited cancer patients ≥ 70 years and performed the CARG and CRASH score before starting systemic cancer treatment. The feasibility and potential of the two score systems were assessed by comparing the score results with each other as well as the physicians' therapy decisions with the score results. Furthermore, the necessary time for patient interviews was evaluated and patient-reported symptoms were analyzed for toxicity evaluation (PRO-CTCAE [3]).

Results

In the pilot study we recruited 20 elderly cancer patients. The results of both scores differed from the physician's assessment by predicting a higher chemotherapy-associated toxicity

(CRASH Combined Score 10% vs CARG 15% vs Physicians 90% of patients in the low toxicity risk prediction category). The results revealed a discrepancy in risk predictions between the two score systems. Additionally, the analysis indicated that the interview of the CARG score can be performed much faster than the one of the CRASH score (mean 3.3 min vs 27.1 min). The correlation between patient-reported toxicity and the scores' or physicians' predictions remains to be further analyzed on a larger scale.

Conclusion

The pilot study indicates the feasibility and potential of an onco-geriatric assessment to improve cancer therapy in the elderly. However, the results also clearly demonstrate the importance of further evaluating which one of the score systems predicts chemotherapy-associated toxicity better.

In the future, the score with higher predictive performance may be implemented in clinical routine for improving onco-geriatric therapy decisions or may serve as a stratification tool in clinical studies.

References

[1] Hurria A et al. Predicting chemotherapy toxicity in older adults with cancer: a prospective multicenter study. J Clin Oncol 2011; 29:3457-65.

[2] Extermann M et al. Predicting the risk of chemotherapy toxicity in older patients: the Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) Score. Cancer 2012; 118:3377-86.

[3] Basch E et al. Use of patient-reported outcomes to improve the predictive accuracy of clinician-reported adverse events. J Natl Cancer Inst 2011; 103:1808-1810.

Quality of Cancer Care Kongress 2017, Berlin

Evaluierung onko-geriatrischer Score-Systeme zur Vorhersage therapieassoziierter Toxizität bei älteren Krebspatienten

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Hintergrund

Durch physiologische Veränderungen ist es bei älteren Patienten besonders schwierig, die geeignete Krebstherapie zu finden. In den letzten Jahren wurden daher zur Einschätzung des Therapierisikos älterer Krebspatienten zwei Score-Systeme entwickelt: der CARG-Score (Cancer and Ageing Research Group) [1] und der CRASH-Score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2]. In der klinischen Praxis wurden diese bisher jedoch nicht ausreichend evaluiert. Unser Ziel ist es, diese onko-geriatrischen Score-Systeme im klinischen Alltag hinsichtlich ihrer Anwendbarkeit und Vorhersagekraft zu untersuchen.

Methoden

Der CRASH- und der CARG-Score kombinieren verschiedene geriatrische sowie onkologische Parameter und stufen den Patienten in eine Risikogruppe für das Auftreten therapieassoziierter Toxizität ein. In unserer Pilotstudie wurden Krebspatienten ≥70 Jahre vor Therapiebeginn rekrutiert und der CRASH- und CARG-Score erhoben. Die Score-Ergebnisse wurden untereinander, sowie mit der Therapieeinschätzung des behandelnden Hämato-Onkologen verglichen. Außerdem wurde die benötige Erhebungszeit dokumentiert.

Ergebnisse

In die Pilotstudie wurden 20 Patienten eingeschlossen. Der CRASH-Score (kombinierter Score) ordnete 10% und der CARG-Score 15% der Patienten in die Patientengruppe mit geringerem Toxizitätsrisiko ein. Der Hämato-Onkologe erwartete dagegen bei 90% der Patienten eine gute Therapiefähigkeit und –verträglichkeit. Die Vorhersagen der Score-Systeme unterscheiden sich teilweise deutlich voneinander. Die Erhebung des CARG-Scores war weniger zeitaufwändig im Vergleich zum CRASH-Score (durchschnittlich 3,3 min versus 27,1 min).

Diskussion und Zusammenfassung

Die onko-geriatrischen Score-Systeme CRASH und CARG besitzen das Potential, die Therapieentscheidung älterer Krebspatienten zu unterstützen. Zur Bewertung ihrer Eignung

in der klinischen Praxis wird die Aussagekraft der Score-Systeme derzeit in einer größeren Patientenkohorte genauer evaluiert und verglichen.

Literatur

[1] Hurria A et al. Predicting chemotherapy toxicity in older adults with cancer: a prospective multicenter study. J Clin Oncol 2011; 29:3457-65.

[2] Extermann M et al. Predicting the risk of chemotherapy toxicity in older patients: the Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) Score. Cancer 2012; 118:3377-86.

Jahreskongress der Deutschen Gesellschaft für Geriatrie 2017, Frankfurt

Can onco-geriatric score-systems predict chemotherapy-associated risks in elderly cancer patients? A comparison of risk predictions

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Introduction

Due to physiological alterations and comorbidity, a benefit-risk assessment for systemic cancer therapy regimens is particularly challenging in elderly cancer patients. Recently, two promising oncogeriatric score-systems were developed for risk prediction of chemotherapy-associated toxicity in elderly cancer patients: the CARG score (Cancer and Ageing Research Group) [1] and the CRASH score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2]. However, in clinical routine, they have not yet been evaluated sufficiently.

Objectives

To compare directly the CARG score, the CRASH score and clinical judgement regarding the consistency of risk predictions.

Methods

The CARG and CRASH score combine different geriatric and oncological parameters, stratifying patients into different risk categories of chemotherapy-associated toxicity. We assessed both scores in cancer patients ≥ 70 years before start of treatment and captured physician's prediction of therapy risk. An interim analysis of 90 patients was carried out. We investigated the consistency of predictions using the Chi-Square test and Spearman correlation analysis.

Results

No significant relationships were found - neither between the CARG and the CRASH score, nor when physician's predictions were compared to both scores (Fisher's exact test, two-sided: 0.704, 0.403, 0.690; respectively). The Spearman correlation coefficient of both scores indicated only low correlation (0.191; p value 0.071).

Conclusion

The interim analysis indicates a discrepancy of risk predictions between the scores as well as between the physician's risk prediction and the scores.

Therefore, future investigations will focus on the predictive performance of both scores for actual toxicity and symptom load during chemotherapy.

References

[1] Hurria A et al. Predicting chemotherapy toxicity in older adults with cancer: a prospective multicenter study. J Clin Oncol 2011; 29:3457-65.

[2] Extermann M et al. Predicting the risk of chemotherapy toxicity in older patients: the Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) Score. Cancer 2012; 118:3377-86.

Jahreskongress der Europäischen Gesellschaft für Klinische Pharmazie 2017, Heidelberg

Evaluation of two score systems predicting therapy-associated risks in elderly cancer patients

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Background and Objective

A benefit-risk assessment of systemic cancer treatment is particularly challenging in elderly cancer patients. Hence, two promising onco-geriatric score-systems have been developed for risk prediction of therapy-associated toxicity in the elderly: the CARG score (Cancer and Ageing Research Group) [1] and the CRASH score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2]. However, in clinical routine, they have not yet been evaluated sufficiently.

Our aim was to evaluate and compare the CARG score and the CRASH score regarding their predictive performance.

Setting and Methods

Both score systems combine different geriatric and oncological parameters, stratifying patients into specific risk categories of therapy-associated toxicity. We assessed both scores in cancer patients ≥ 70 years before start of inpatient treatment. Severe toxicity during therapy was captured from medical records. In an interim analysis, we assessed toxicity rates in the different risk categories and analyzed differences using the chi-square test. Furthermore, we calculated the area under the receiver-operating characteristic curve (AUC ROC) for evaluating discrimination.

Main outcome measures

Classification in different risk categories according to the score systems, as well as severe toxicity (Common Terminology Criteria for Adverse Events Grade 3 and 4) during treatment course.

Results

Interim analysis comprised 51 patients (mean age: 77 years, stage IV: 55 %, solid tumor: 63 %). In both score systems, toxicity rates increased with higher risk categories. However, differences in toxicity rates were only significant for the CARG score (CARG: low 0 %, mid

67.9 %, high 85.7 %, p = 0.036; combined CRASH: low 0 %, mid-low 54.5 %, mid-high 72.4 %, high 90.9 %, p = 0.200). AUC ROC denoted sufficient discrimination for both scores(CARG: 0.743, p = 0.008; CRASH: 0.773, p = 0.003).

Conclusion

Preliminary results in 51 patients suggest adequate calibration and discrimination of the CARG and the CRASH score. The score with higher predictive performance may be implemented in clinical routine for improving cancer treatment decisions in the elderly.

References

[1] Hurria A et al. J Clin Oncol 2011; 29:3457-65.

[2] Extermann M et al. Cancer 2012; 118:3377-86.

Deutscher Krebskongress 2018, Berlin

Comparison of two score systems predicting therapy-associated toxicity in elderly cancer patients

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Introduction

A benefit-risk assessment of systemic cancer treatment is particularly challenging in elderly patients. Two promising onco-geriatric score systems have been developed for risk prediction of therapy-associated toxicity in the elderly: the CARG score (Cancer and Ageing Research Group) [1] and the CRASH score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2].

Our aim was to compare both score systems regarding their predictive performance.

Methods

CRASH and CARG score combine different geriatric and oncological parameters, stratifying patients into risk categories for therapy-associated toxicity. We assessed both scores in cancer patients ≥ 70 years before start of treatment. Severe toxicity (Common Terminology Criteria for Adverse Events Grade 3 and 4) during therapy was captured from medical records. In an interim analysis, the association between score values and toxicity rate was assessed by logistic regression. We calculated the area under the receiver-operating characteristic curve (AUC ROC) for evaluating discrimination.

Results

In an interim analysis of 51 patients (mean age: 77 years, stage IV: 55 %) toxicity rates increased with higher risk categories. Univariate logistic regression suggested that both score systems are significant predictors of toxicity (CARG: p = 0.017, CRASH: p = 0.005). AUC ROC denoted sufficient discrimination for both score systems (CARG: 0.743, p = 0.008; CRASH: 0.773, p = 0.003).

Conclusion

Preliminary results in 51 patients suggest adequate calibration and discrimination of the CARG and the CRASH score. Final data analysis will reveal which of the two scores exhibits a higher predictive performance and may be implemented in clinical routine for improving cancer treatment decisions in the elderly.

[1] Hurria A et al. J Clin Oncol 2011; 29:3457-65.
[2] Extermann M et al. Cancer 2012; 118:3377-86.

Comparison of Two Score Systems Predicting Therapy-associated Toxicity in Elderly Cancer Patients

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[#] equal contribution

Background

A benefit-risk assessment of systemic cancer treatment is particularly challenging in elderly cancer patients. Two promising onco-geriatric score systems have been developed for risk prediction of therapy-associated toxicity in the elderly:

- the **CARG** score (Cancer and Ageing Research Group) [1]
- and the **CRASH** score (Chemotherapy Risk Assessment Scale for High-Age Patients) [2].

However, in clinical routine, they have not yet been evaluated sufficiently.

Aim

- **Comparison** of the CARG score and the CRASH score regarding their **predictive performance**.

Onco-geriatric Score Systems

CARG Score

Area	Parameter
Patient characteristics	▪ Age
Type of disease	▪ Cancer type
Therapy regime	▪ Dose ▪ Number of chemotherapy drugs
Laboratory parameter	▪ Hemoglobin ▪ Creatinine clearance
Hearing	▪ Hearing ability
Functional status	▪ Number of falls ▪ Help in taking own medicine ▪ Ability of walking one block ▪ Limitation of social activities

CRASH Score

Risk		Parameter
Chemo-therapy	Cancer therapy	▪ Chemotoxicity
Hemato-logic	Laboratory parameter	▪ Lactate dehydrogenase (LDH)
	Clinical parameter	▪ Diastolic blood pressure
	Functional status	▪ Instrumental Activities of Daily Living (IADL)
Non-hemato-logic	Functional status	▪ Eastern Cooperative Oncology Group Performance Status (ECOG)
	Cognitive function	▪ Mini Mental Status (MMS)
	Nutritional status	▪ Mini Nutritional Assessment (MNA)

Risk of toxicity → **Risk therapy-associated toxicity**: Low | Mid | High

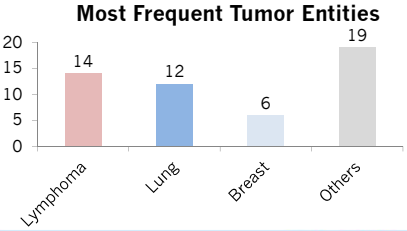
Risk of toxicity Combined, Hematologic, Non-Hematologic → **Risk therapy-associated toxicity**: Low | Mid Low | Mid High | High

Study Design and Analysis

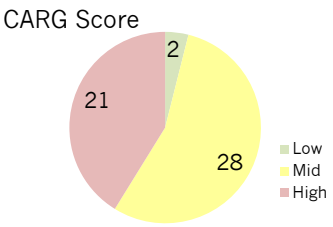
- We assessed both scores in **cancer patients ≥ 70 years** before start of treatment. Severe toxicity during therapy was captured from medical records (Common Terminology Criteria for Adverse Events Grade 3 and 4).
- In an **interim analysis**, we analyzed differences regarding toxicity rates in the different risk categories, using the **exact chi-squared test.** The association between score values and toxicity rates was assessed by **univariate logistic regression**. Discrimination was evaluated by the area under the receiver-operating characteristic curve (**AUC ROC**).

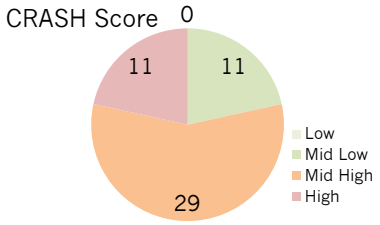
Patient Characteristics

	Patients (n=51)
Age (mean)	77 years
Sex	Female 53% Male 47%
ECOG	0/1 76% 2/3 24%
Stage	IV 55% III 17%

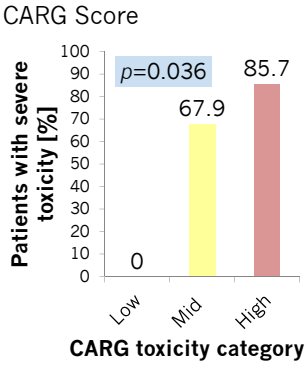


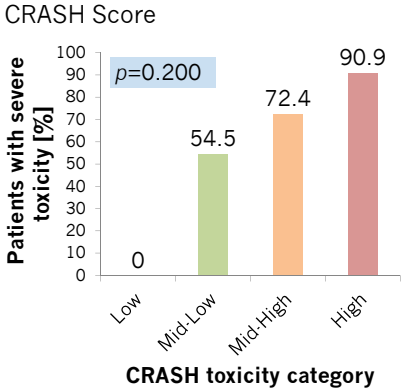
Score Predictions





Score Performance - Toxicity Rates

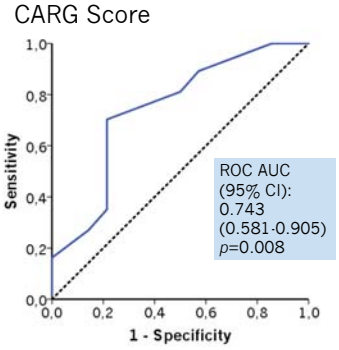


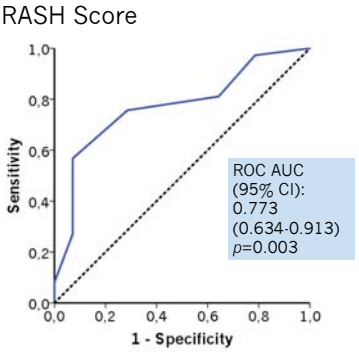


Score Performance - Logistic Regression

	p-value	OR (95% CI)
CARG	0.017	1.444 (1.068-1.954)
CRASH	0.005	1.913 (1.212-3.020)

Score Performance - ROC Curves





Conclusion

- Preliminary results of 51 patients suggest **adequate calibration and discrimination** of the CARG and the CRASH score. Final data analysis will reveal which of the two scores has a higher predictive performance.

References

[1] Hurria A et al. J Clin Oncol 2011; 29:3457–65
[2] Extermann M et al. Cancer 2012; 118:3377–86

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